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FAS MANAGEMENT CONFERENCE

CHALLENGES OF THE 80's

December, 1979

TASK GROUP POSITION PAPERS





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in the Coming Decade

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FAS Management Conference  
The Williamsburg Hospitality House  
December 2, 3, 4, & 5, 1979

TASK GROUP - The Job and Resources of FAS in the Coming Decade

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	Thomas R. Saylor	- Co-Chairman
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	Jimmy D. Minyard	- Foreign Market Development
	Turner Oyloe	- Commodity Programs
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FAS MANAGEMENT CONFERENCE

THE JOB AND RESOURCES OF FAS  
IN THE COMING DECADE



## THE JOB AND RESOURCES OF FAS IN THE COMING DECADE

### I. The Need for a Management Plan

- A. The agency in some of the most critical areas of management, despite a perceived implicit policy, has too often found itself operating on the basis of ad hoc procedures. This method has not been internally consistent or has not maximized the effective development of resources for the long-term strength of the agency.
- B. Our operating environment is changing. To ensure that our capability meets future demands with the same level of effectiveness for which FAS has become known throughout government in the past, we must review our basic management policies toward the achievement of an explicit long-term strategy.
- C. We need a management plan, one that can guide our decisions and actions for the next several years. This plan should be the basis for operation in key organizational areas and will represent a framework for long-term organizational development.

### II. Issues

- A. FAS will continue to have three principal missions in the 1980's.
  - 1. Long-term and stable expansion of foreign markets for U.S. agricultural commodities. This effort will be made through a broadly-based and integrated system of services designed to complement the activities of the private sector, including;



- a. Market analysis and information dissemination.
  - b. Representing producers for specific trade policy problems and general negotiations.
  - c. Promotion and servicing of U.S. agricultural trade.
  - d. Provision of export credit.
2. Representation of the Secretary of Agriculture and USDA agencies when required abroad.
  3. Management of certain agricultural import programs.
- B. Changes in the market environment in the 1980's can be expected to make FAS operations more complex and its export growth objectives more difficult to accomplish.
1. Slower growth in developed countries will affect rate of growth in demand overall and stimulate increased protectionism.
  2. Energy and other costs will increase the importance of transportation and marketing; as export factors, and could lead to greater regionalization of markets in the case of certain commodities.
  3. ~~X~~ Very slow growth in poorest LDC's; market opportunities will be rare and limited to basic foodgrains soybean oil.
  4. Slower but significant growth potential in middle income LDC's and CPE's, particularly in feed sector; marketing infrastructure may become an increasingly important limiting factor.



5. Increased competitive pressures in specific commodity sectors (e.g., Brazil and Spain in citrus, Brazil and Argentina in soybeans).
  6. The likelihood of increased pressure domestically and internationally for mechanisms and policies to maintain stability in world commodity markets.
  7. Uncertainty, in terms of inflation, monetary developments, and market instability will place greater demands on FAS to reduce the uncertainty through:
    - a. Greater stability in growth of exports and imports.
    - b. Better information base and improved analytical capability.
    - c. Early identification of potential trade problems.
    - d. More intensive public information dissemination.
- C. We need to decide whether the changing market environment will require fundamental changes in the FAS program emphasis. We need to consider such things as:
1. The relative importance and the relationship of commodity analysis, market development, and trade policy.
  2. The impact of change on our field efforts--their organization and emphasis.
  3. FAS and transportation.
  4. The roles of servicing markets, assisting exporters, and direct sales promotion in market development.

### III Assumptions

- A. We approach the challenge of the 1980's with three general assumptions about the resources
1. There will be little change in the current resource base in real terms.
  2. There will be no major changes in mission or organization except for the likely absorption of OGSM.
  - ? ③. There will be a decreasing capability to compete with the private sector for personnel.
- B. Continued expansion of demand for FAS services, and the resource limits expected, suggest at least three broad areas in which to improve our operation.
- ①. Greater coordination in the use of analytical and other resources, both within and outside FAS.
  2. Better planning in the development and use of resources over a longer period of time.
  - ③. Substitution of new technological capabilities for limited personnel resources.

### IV. SUMMARY

The purpose of this conference is to find out what we need to do--what changes to make in management practices and direction--to accomplish the FAS mission.

The purpose of this session is to review whether we have the scope of our mission and operating environment properly defined as a basis for planning long-term organizational development requirements.

In short, we're here to answer this question: Will we have the right people doing the right things in the right place in the best way to meet the needs of the next 10 years in agricultural trade?









FAS MANAGEMENT CONFERENCE

NEW TECHNOLOGIES  
FOR THE  
FOREIGN AGRICULTURAL SERVICE

November 28, 1979



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4. Improvement of Management Support

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## SECTION A

### INTRODUCTION AND EXECUTIVE SUMMARY

#### 1. Introduction

Effective service to the U.S. trade and to the American farmer requires that the Foreign Agricultural Service make maximum use of the tools of modern data systems management and information processing technology. Most importantly the information programs of FAS must be equipped to respond to the dynamic changes that are taking place in world agricultural trade. Successful response will depend in large measure upon the ability of FAS to plan and make some major short-range and long-range improvements in the management of its information systems and in the application of available information processing technology. Some of these improvements are already underway. Others must be decided and a long-term plan adopted by the top management of FAS to achieve their implementation.

#### 2. FAS Use of Information Technology

The Foreign Agricultural Service has long recognized the value of using modern information processing technology. The data system, developed by Commodity Programs, for example, was launched in 1966 and over the years the investment by FAS in this system has gradually increased. However, this system--which consists mainly of major data bases containing foreign production, supply and distribution data, crop condition data, data on U.S. trade, and world trade data covering grains--contains some major shortcomings.

The most important shortcoming is that the data bases, which were developed separately to support a commodity information system providing services for a 6 billion dollar export market, are simply not adequate to support a commodity information system servicing a 35 or, eventually, a 65 billion dollar export market. Moreover, the World Trade Data base is limited by the fact that it covers only grains and the crop condition assessment data system, adopted by FAS in early 1979, has not been fully integrated into the FAS commodity analysis and information dissemination system. The Trade Policy data base was designed to meet MTN needs and, therefore, must be revised to meet post-MTN needs. ?

In addition, the existing commodity and trade data system has been plagued throughout its life by the fact that the system providing the data--primarily the Attache reporting system--is not automated and, therefore, not equipped to rapidly communicate data and information that can be quickly converted into data bases for use by commodity and trade policy analysts. Furthermore, the present system does not fully provide data in the format and within the tight timeframe required by commodity analysts to develop their contributions to policy decisions, publications and trade negotiations.

Information processing technology has been applied on a limited basis by FAS in other areas. The FAS accounting system is automated and provides not only accounting reports but important financial management and funds control information as well. The Trade Opportunity Referral System is partially automated to provide information on foreign market opportunities to American

exporters. A few automatic typewriters have been acquired to support various word processing and commodity analysis efforts. And the FAS ADP system provides a variety of management reports for personnel management, travel, and passport control.

### 3. Recent Data System Decisions

There have been three major decisions made recently to improve the management and operation of the FAS data system. These decisions have short and long-range importance to the effectiveness of the FAS commodity information system, and they provide FAS with the technological tools to achieve far reaching improvements in information processing throughout the agency.

First, in early 1979, FAS elected to capitalize upon the research and development investments of USDA, the National Aeronautics and Space Administration, and the Department of Commerce in the use of satellite collected data for foreign crop condition assessment. This decision resulted in the addition of a line division to Commodity Programs and the procurement of computer resources needed to operate this function. The Crop Condition Assessment represents the introduction of a new modern information technology system to FAS. The system consists of specialized computer hardware and software designed to permit the interactive analysis of Landsat and meteorological data for the purpose of assessing crop conditions on a worldwide basis. Beginning in late 1979, and continuing through 1980, the CCAS will be tested, generating crop condition assessments for selected geographic regions. The products generated will be evaluated by the commodity divisions in terms of timeliness and accuracy, and then areas of improvement will be identified for this new system.

Secondly, the installation of a minicomputer in Washington will provide FAS with a substantial new data systems capability. This minicomputer gives FAS greater control over the automated processing of its data. In the past, most computer services have been provided by the Department's Washington Data Processing Center. In the future, while FAS must continue to rely on the Washington Data Center, the availability of the minicomputer means, for example, that an analyst will get more immediate "interactive" response to his requests for data and statistical analyses. Moreover, the minicomputer will be tied through terminals to divisions throughout FAS not only for data support but for word processing support as well.

Thirdly, the State Department's implementation of a worldwide minicomputer network, moreover, means that FAS, tied to the State global system, can begin the process of modernizing its field communications system. Attache reports and requests for data can be processed through the Embassy's minicomputer and sent directly through State's telecommunication network to the FAS minicomputer in Washington. FAS analysts, in turn, can communicate directly with Attaches and Trade Officers throughout the world. Trade opportunity information can be rapidly processed at the post and sent to the American trader in vastly less time and with less investment of people resources than now required.



#### 4. Assumptions and Recommendations for the Future

The groundwork, then, has been laid for some revolutionary improvements in the application of modern information processing technology to the commodity analysis, trade policy, and information dissemination system of FAS and to the overall management of the agency. The New Technologies Group recommends that FAS build upon the improvements already underway and launch some new improvements in the management and use of modern information processing technology.

This effort during the coming decade should be guided by the following major assumptions:

- (1) Demands on FAS for information will continue to increase and the importance of this information for decision-making within and outside Government will grow.
- (2) Data bases must be shared with other USDA agencies and other Government agencies.
- (3) Personnel costs will continue to increase and additional personnel resources will be limited.
- (4) Hardware and communications systems costs will decrease.
- (5) Equipment owned by FAS will be reaching the end of its useful life in the 1984-85 time frame.
- (6) Word processing systems will continue to be refined and more powerful generalized software will continue to become available.

Improvements in the use and management of technology should be carried out in the coming decade in four major areas:

##### Recommendation 1: Improvement of Analytical Capability

To realize real improvements through the use of information processing technology, FAS must begin a long-term effort to develop a common commodity trade and crop condition data base and an effective data base management system that eliminates the inconsistencies and inefficient data redundancies in the existing system and gives analysts quick access to all the available data in a useful form. Econometric modeling, computer graphics and improved statistical packages must all be considered for use in FAS.

##### Recommendation 2: Improvements of Field Communications System

To feed data and information more quickly and effectively into the data base and to communicate trade opportunity information more rapidly, FAS must use the State minicomputer system as the basis for gradually converting the Attache Reporting System and the Trade Opportunity Referral System into a worldwide FAS automated reporting and communications system.

① Recommendation 3: Improvements of Systems Organization

To achieve essential efficiencies in management and use of ADP systems and resources, FAS must combine its computer services, resources, (i.e. equipment, people, and money) and organizations.

Recommendation 4: Improvement of Management Support

To gain the maximum benefit from the availability of a more effective data base and computer capability, FAS must develop a modern computer based word processing system that capitalizes on the new capacity of equipment to simultaneously perform both word processing and data processing and, in addition, must develop a management information system that will give top management in FAS quick access to computerized information that will be useful for decision-making on program issues and for managing agency resources.

5. Implementation Requirements

The implementation of the recommended improvements requires some major time phased steps that will take much of the coming 10 years to complete.

The effort to undertake these improvements must begin with the development of a 5-year Technology Development Plan which details the specific tasks, timetable, resources levels, and budgetary strategy required. The plan should be completed and approved in time to include the required activities and first steps resource requirements in the fiscal year 1982 budget.

The following summarizes, by major recommendation, the recommended implementation plan.

a. Improvement of Analytical Capability


FY 1980

- \* Establish and staff data base administration function.
- \* Identify and select data management software packages to be used for near term analytical support.

FY 1981

- \* Implement procedures that allow use of generalized packages and report writers by users for analytical support.
- \* Make organizational changes recommended to facilitate data collection and use in analysis.
- \* Define common data base requirements.
- \* Begin standardization of coding structures.

FY 1982-85

- 
- \* Work towards the evolution of a common integrated agency data base through standardization of existing data bases.

b. Improvement of Field Communications

FY 1980

- \* Implement limited pilot commodity reporting system with London.
- \* Implement pilot TORS system at three foreign posts.

FY 1981-82

- \* Develop standardized reporting format for all reports.
- \* Expand pilot to additional posts.

FY 1983-85

- \* Full implementation of attache reporting system to all posts.

c. Improvement of Systems Organization

FY 1980

- \* Complete 5-year ADP plan.  
DSD through joint activities.

FY 1981

- \* Take steps to facilitate eventual integration of CCAD and

FY 1982

- \* Link CCAD and DSD computers and explore shared use.



FY 1983

- \* Study alternative locations for setting up a single FAS facility in Washington area.

FY 1984

- \* Identify combined requirements for equipment and software to replace existing systems.

FY 1985

- \* Select and procure equipment and software.

FY 1986

- \* Reorganize CCAD and DSD into new ADP organization. Begin operating new facility.

d. Improvement of Management SupportFY 1980

- \* Implement word processing support of all FAS program areas and management.

FY 1981

- \* Install direct communications link from Wang word processing system to Departmental photocomposition unit.
- \* Increase word processing support as needed in program areas and management.

FY 1982

- \* Conduct pilot test of message switching between FAS/Washington terminals and agricultural attache posts.

FY 1983-85



- \* Implement records management system.
- \* Implement terminal to terminal communication system between FAS/W and agricultural attache posts.

6. Major Policy Issues

Implementation of the recommended improvements involves a number of major program, organization, and resources policy issues. The most important policy issues are:

- The long-range commitment by FAS to the establishment of a modern information management system and complementary organization of work.
- The long-range commitment by FAS to investing the staff effort required to develop a modern information management system.
- The long-range commitment by FAS to obtaining the additional resources that will be necessary to develop and operate a modern information management system.

In addition, there are specific management and resources policy issues which must be addressed:

-  - The extent of agreement on the long-term need for a common data base containing full commodity, marketing and trade policy coverage.
- The extent to which communications and information dissemination can be controlled in a decentralized automated system.
- The need for unified executive direction and organization of FAS information management system. Where does a unified information management organization best fit in FAS?
- The extent of commitment to the establishment of an automated Attache reporting and communication system.
- The need for recruitment and development of both professional and technical program and management staff members who are well prepared to effectively develop and use a modern information processing system.
-  - The extent to which FAS must continue to rely upon the Department's Washington Data Processing Center for the bulk of its computer support. Will FAS be able and permitted to operate its own independent data center in the foreseeable future?



## SECTION B

HIGHLIGHTS OF TECHNOLOGICAL DEVELOPMENTS AND POTENTIAL

Mathematicians since the days of Pascal and Leibniz have been describing and sometimes building, "calculating engines" to provide the grinding numerical computations for mathematical functions otherwise "unsolvable" in a practical amount of time. In the past century Charles Babbage built a programmable machine for such purposes. It was not until the advent of electricity, with electromechanical switches and relays, that data processing began to flourish with the development by Herman Hollerith of punch card processing for the U.S. Bureau of Census. The development of Marconi's invention created a whole new technology -- the vacuum tube -- which, applied to automated calculators, provided a thousand-fold increase in switching speeds over the relay.

In 1945, John Von Neumann wrote his classic paper proposing a stored program computer and the following year the eventual founders of UNIVAC Co. began work on the first "Von Neumann" machine. The first UNIVAC I was delivered five years later (1951). Within the next five years IBM, Burroughs, and others designed and built numerous vacuum tube Von Neumann machines. These machines required programmers who were intimately familiar with their internal "mechanics," or instruction sets, to make them do useful work, and a new profession was born. These programs (and related procedures) became known as "software".

As it turned out, the miniaturized vacuum tube had hit its peak about this time. Electronics began to use a new, solid-state device -- the transistor -- which had faster switching speeds, was smaller, used less power and was far more reliable. The computer industry redesigned its Von Neumann machines to utilize solid state technology and about 1958 the "second generation" of computers was born.

Experience had taught some expensive lessons about programming in the language of the computer. Buying a faster computer meant scrapping all the old programs and reprogramming for the new machine. A common language for all machines was needed, and many were proposed. The Department of Defense selected COBOL, later to be adopted by the entire U.S. Government. Also, certain common functions for controlling the hardware were programmed by the manufacturer and were provided free with the machine. Thus the first step towards modern "operating systems" was taken.

During the early 1960's, solid state physicists, chemists, and engineers were busy doing for the transistor what their predecessors did for the vacuum tube -- miniaturization. Using photography and chemical etching, they were able to place a transistor and all its related resistors, capacitors, and inductance on a single ceramic base about one centimeter square. Again the computer industry redesigned, retooled, and about 1965 announced the "third generation" Von Neumann machine: much smaller, faster, cooler, more reliable, and cheaper.

Certain software technology had been accumulating, and the Third Generation hardware was designed to be driven by master programs (the operating system) with traditional application programs operating in a "slave" state. Generalized file management and non-procedural languages began to appear to reduce the labor intensive-ness of program production. Never-the-less, as hardware costs continued to drop, software costs continued to rise, with higher paid personnel programming even larger, more complex applications. About 1970 the two curves crossed, and hardware became cheaper than the software running it.

The physicists and engineers worked on. About 1970 multiple transistor circuits on yet smaller "chips" came into use (large Scale Integration, or LSI), still faster, more reliable and cheaper. More complex, built-in logic was incorporated, which made the machine appear even faster, more reliable, and bigger than its really was. The "virtual" machine had arrived: the "fourth generation." The trend in software continued towards more generalized, off-the-shelf packages with powerful, easy-to-use languages. These include Data Base Management Systems, (DBMS), Data Dictionaries, Query languages for non-programmer use, statistical routines, etc.

At the same time that IBM and her direct competitors were using cheaper circuitry to build larger, more complex machines, several enterprising firms used cheaper circuitry to build cheaper machines.

The minicomputer rose to become a significant force in the general computer field. In fact, LSI made whole "microprocessors" available on a single chip. Pocket calculators could do more, faster and cheaper than old electromechanical machines. Toys, automobiles, and telephones are controlled by microprocessors. Any place logic and procedures can be applied, it can be "built in." Distributed processing hardware is now the largest cost component today in the packaging. Even the programs can be built in, if they are standard or unchanging. Computer power can now be available where it is needed, rather than at some remote computer center.

The same technology that has brought us the modern Von Neumann machine has brought us vastly improved communications, from microwave to laser and optical fiber. Computer components, themselves, have become integrated into communications, and vice versa. The FTC has had to totally reevaluate its regulations, and even its authority is clouded by this total integration. Space age technology has contributed satellites for both intelligence gathering and communications at highly competitive costs. Multinational corporations (or far-flung agencies like FAS) can now bring remote personnel, such as Attaches, into the family and can provide the same reports at the same time all over the world.

Just as Marconi probably did not see all the extensive ramifications of the radio, the mathematicians who originated computers did not predict the pervasive adoption of their creation for noncomputational purposes. The function of data storage and retrieval, however, is now one of the major uses of the "computer." A whole theoretical and practical discipline has been developed to describe and manage "data" in its many dimensions and



relationships. At the same time, management science began to realize that managing the computer was not sufficient: The real concern should be for managing information. Management, at first overwhelmed by the rapidity of technological progress, has begun to develop a point-of-view and an analytical discipline to view information as an asset -- a resource, -- comparable to the classic resources of money, personnel, and material.

In FAS, information is the principal "product". Indeed, the "Information Resource Management" concept applied to FAS could not only improve the technological management of data, but could improve the timeliness, completeness, and accuracy of the published product. It could also shed light on the entire management of the agency, from policy level down, by identifying voids, duplications, inconsistencies, inefficiencies, etc., on an organization scope, not just inside a computer. At the same time information could be identified and developed to serve the true needs of management.

In the early days of business computers it was found that the principle benefit did not derive from the power of the machine so much as from the operational and organizational efficiencies that resulted from analysis and structuring of the data and procedures. Unfortunately, with the glamor attending technological triumph after triumph, the organizational analysis may have become arrested, even centered, around the original computer systems concepts.

The trend in hardware and software is clear: faster, more reliable, and cheaper hardware; hardware devices tailored to specific functions, such as paralled array processors, data base processors, graphics processors; software that stores and manages data so as to represent their complex interrelationships; software that accepts a description (in the English language) of the desired information product and develops the report program and the report.

Software is available now for word processing, electronic mail and other office functions, and this will be integrated more and more with traditional data processing. Programmers will not be required to develop most data retrieval reports, because of the ability to enter and edit textual information and to employ "artificial intelligence" programs to interpret English language requests either written or spoken and develop the standard data processing reports. Output can also be "spoken" via voice synthesizers. Anyone with access to a telephone will have direct access to the computer. Cathode Ray Tube (CRT) devices may give way to other, flat graphic display devices that can be linked directly to the computer via telephone. And on and on.

No attempt will be made to enumerate the vast array of devices, already proven, waiting for mass production and mass marketing. Some of them are now advertised on television. They will all combine to provide more complex operations inside the machine in order to provide simpler operation by the end user at his desk. The emphasis will be more on defining user needs and applying our best analytical skills to Information Resource Management and Data Base Administration, providing the analytical and hardware tools to enable users to work effectively from statistical clerks and typists to the analyst, the Attache, even the Administrator if he chooses. A new generation of organizational analysis and structuring is at hand, benefited by the enabling technology of the "fourth generation" computer.

## SECTION C

CURRENT INFORMATION SYSTEMS AND FUTURE NEEDS1. How Technology is Being Applied in FAS Today

The current data systems, programs and applications in FAS have been established over the years on an incremental basis to support the major program areas of FAS: Commodity Programs, Market Development, Trade Policy and Management. The care and feeding of the automated data bases established to support each program area is the responsibility of the user assisted by the Data Systems Division.

The majority of the data needed to keep the data bases current must be manually screened, extracted and formatted by professional or semi-professional staff members. The Data Systems Division develops programs for data retrieval and report formats. The Washington Data Processing Center provides most of the computer support for the existing system. The teletype wire service between FAS Washington and the Attache posts allows the exchange of commodity, marketing and trade data. This mechanism is non-standard in format and extremely slow. Another aspect of existing technology is the interface with other Government and USDA agencies: Treasury for import licensing, the Kansas City Computer Center for P.L. 480 credit sales, and the New Orleans Computer Center for accounting and personnel. These interfaces are for the most part manual or a data exchange via physical transfer of magnetic tapes. The Import License System is an example of the use of new, on line capabilities for source data entry and central on-line access of data by the users. Finally, the technology for administrative support consists primarily of manual record and document handling. Management functions share the teletype links to embassies around the world.

Looking to the future, two major decisions have been made recently by FAS to advance the application of information processing technology to its programs. First, in January, 1979, FAS elected to capitalize upon the investment of USDA, NASA and the Commerce Department in the use of satellite collected data for foreign crop condition assessment. This decision resulted in establishment of the CCA Division in Commodity Programs and the procurement of computer resources needed to operate this function. Secondly, in early 1979, the Department of State elected to upgrade its global communications network. This effort included plans for the procurement and installation of standard data/word processing equipment at selected embassies around the world. This action by State provided FAS with the opportunity to invest in a computer system that would improve the support capability provided to FAS programs and provide the opportunity to test a direct data exchange system between FAS Washington and foreign posts. In a very real sense, this new computer system represents an FAS investment in new technology that can be applied to support a wide range of FAS information processing needs.



## 2. The Current System, Its Limitations, and Future Program Support Needs

The present application of information processing technology, its limitations and the needs of FAS program managers for future support can be understood best in terms of the four major program areas that the systems service: Commodity Programs, Market Development, Trade Policy and Management.

### a. Commodity Programs

#### (1) Introduction to Commodity Division Functions

Before the subject of new technologies can be addressed in this area, it is important to understand the current functions performed by the commodity divisions and to describe how these functions are supported by the existing computer processing applications available in FAS. The primary function of the commodity divisions analytical elements is the collection, manipulation, analysis, forecasting, and dissemination to the public of finished commodity intelligence information on the current world agricultural situation.

Secondary functions of the commodity divisions include preparing specific analytical products in response to requests from management or the public, participating in meetings of the interagency supply estimates committees for selected commodities, assessing the impact of foreign policies which may effect U.S. trade, preparing information and data to be used in international trade negotiations and developing and maintaining a staff of professional economists to analyze commodity intelligence and assess the impact of these changes on the world agricultural situation.

An important function which is not often expressed within the analytical elements of the commodity divisions, is that of providing analytical support to the marketing elements within the division.

Before an effective information system can be designed and developed to meet FAS information needs, the role of the analytical elements must be defined in relationship to the mission of FAS as an export promotion and service agency.

If FAS is to carry out its assigned mission, then greater emphasis must be placed on the analysis of the world agricultural situation in the light of the market opportunities for U.S. agricultural commodities.

#### (2) Description of Existing Computer Applications

Existing computer system applications which support Commodity Programs include the Crop Condition Assessment system, the U.S. Trade System, the Production, Supply and Distribution System, the World Trade System, and the Import Licensing System. These systems are briefly described below:



(a) Crop Condition Assessment System (CCA)

The Crop Condition Assessment System represents a new technology system within FAS. The system consists of specialized computer hardware and software designed to permit the interactive analysis of Landsat and meteorological data for the purpose of assessing crop conditions on a worldwide basis. The system will begin providing crop condition assessment of selected agricultural areas for the 1979-80 crop season.

Crop condition assessments will be prepared for the commodity divisions and will enable commodity analysts to better forecast crop production in the selected areas assessed.

(b) U.S. Trade System

The U.S. Trade System includes a batch processing oriented computer file which contains data on U.S. agricultural exports and imports. Data contained in the file is supplied by the Bureau of Census in the form of computer tapes. These tapes are processed by the Data Systems Division each month and are used to generate selected computer printouts for the commodity divisions. Data contained in the U.S. Trade file is considered Official U.S. Trade statistics and can only be changed by the Bureau of Census.

U.S. Trade printouts generated by Data Systems Division are used in the commodity divisions to analyze trends in U.S. trade and to answer any questions regarding trade of specific commodities. The U.S. Trade system is also used to create camera copy printouts of selected commodities, which will then be included in FAS circular publications.

(c) Production, Supply and Distribution System (PS&D)

The Production, Supply and Distribution System is an information storage and retrieval system containing statistical data collected by Agricultural Attaches. The system contains data on production, area, yield, beginning stocks, imports, exports, domestic use (consumption) and ending stocks for most important commodities.

The PSD system permits the commodity divisions to access the data via computer terminals and to make changes to the data in the system interactively. New data to be added to the system is entered via the Data-point minicomputer data entry terminals also located in the divisions.

The system also supports batch processing of regularly scheduled reports using a high speed remote job entry terminal in the Data Systems Division offices. The system is used by the Commodity divisions to support their analysis of worldwide supply and demand and to generate statistical tables for FAS circular publications.

Associated with the PSD system is a proprietary software package, called FORESIGHT, and additional software, which permits the transfer of PSD data to the FORESIGHT package. The FORESIGHT software has a user oriented report writer and limited statistical features which offer added flexibility to the system. This package has been used extensively by several commodity divisions to tailor the format of their statistical tables.

(d) World Agricultural Trade System (WATS)

The World Agricultural Trade System is a tape oriented batch processing system that contains data on grain exports and imports. Specific data contained in the system includes country codes for importing or exporting countries, the country of origin, or destination, date of the trade, source of the data, and monthly and cumulative quantities. A specific start month can be designated as the month to begin creating cumulative totals.

Data is entered into the WATS system via the Datapoint entry terminal in the Grain and Feed Division.

The system currently permits four standard output formats. These include a master listing of all reporting countries showing imports and exports by origin and destination; a major competitors listing showing their exports by destination for selected countries; and two matrix type format listings showing greater detail of the master listing and imports by country of origin.

(e) Import Licensing System

The Import Licensing System consists of two basic systems, one operated by FAS and the other operated by U.S. Customs Service.

The FAS operated Importer License Control system maintains data on each Import License issued by the Dairy, Livestock and Poultry Division, Import Group. Data contained in the system includes the name and address of the importer, his license number, quota for a specific commodity and cumulative imports against the quota as reported by Customs consumption entry documents. The system is used to generate new importer licenses twice each year.

The U.S. Customs system implemented in August 1979 in conjunction with FAS design analysts and users is an on-line interactive computer system that maintains an up-to-date record of the status of import licenses issued by the group. This system is connected via telecommunications circuits to all major ports of entry. As imports are received, U.S. Customs personnel enter the amount of the dairy product entering the United States. The system then debits the amount against the importer's quota. The Import group has a computer terminal located in the South Building which permits direct access to information on the status of all licenses.



The FAS Importer License Control system is currently undergoing redesign to utilize the U.S. Customs system and data base.

### (3) Limitations of Current Applications

This section discusses the current limitations and problems associated with the current computer applications.

#### (a) Crop Condition Assessment System

The CCAS is in the first phase of its implementation process. Required computer hardware is currently being installed at the Crop Condition Assessment Division computer facility in Houston, Texas.

Beginning in late 1979 and continuing through 1980, the CCAS will be tested in an operational mode. During this time, the CCAS will be used to generate crop condition assessments for selected geographic regions. These regions have been specified by the commodity divisions for their economic importance in commodity production. Crop condition assessment product generated by the CCAS Division will be evaluated by the commodity divisions in terms of timeliness and accuracy, and will then identify improvement areas for this new technology application.

The CCAS is, however, experiencing problems in the timely receipt of meteorological data from the Joint Agricultural Weather Facility located in the South Building. By early 1980, CCAS will have a high speed digital communications link between Washington, D. C. and Houston, Texas, which should reduce some of this delay.

#### (b) U.S. Trade System

The U.S. Trade System operated by Data Systems Division was designed and programmed in 1969. It has been continuously expanded and revised to accomodate new needs and changing environment. The current system provides three levels of output with approximately 17 different formats depending on the commodity and time series desired. The system output formats are determined by parameters selected by the commodity divisions. Since the system is parameter driven, each time a new output using an existing format is desired a new set of parameters may be coded. Outputs are then generated in a batch processing run. Creation of new parameters is less time consuming than writing a new program, but operational delays can be experienced in obtaining output products. Because of the massive data involved, the system files have never been put on-line for interactive access.

Another problem with the U.S. Trade data is its accuracy. The system includes data reported by U.S. Customs as of the 20th of the month. Thus, a portion of the month's trade is not included in the monthly tape supplied by Census. Other inaccuracies occur because U.S. Customs' documents only show the first country of destination and fail to include transshipments to other countries.

(c) Production, Supply and Distribution System

The PS&D system was originally implemented in 1968 as a batch oriented magnetic tape system. In 1976 the system was converted to operate on the Washington Computer Center (WCC) computer's time sharing system. The historical PS&D data was placed on storage disks and new software was written to permit direct access to the data via computer display terminals.

Commodity division users can access PS&D data and change existing data records from terminals located in the division. Statistical tables can also be displayed if desired. In addition, there are 25 fixed-format parameter-driven report programs which permit the user to generate printouts selectively for office reference or special camera copy printouts for FAS circular publications. In the past year several report programs have been written to meet the new publication requirements.

Several problems exist with respect to use of the PS&D. These include use of a different system to add new records to the data base, limited (i.e. fixed-format) report generation capabilities, and limited statistical analysis features. Other problems associated with the system are the inability to make cross commodity comparisons, or to include other factors which relate to the supply-distribution equation, such as prices.

In order to add new data records to the PS&D, statistical personnel must enter the data into the Datapoint minicomputer via data entry terminal in the commodity divisions. This data will then be loaded into the master PS&D data base overnight. On several occasions several hundred new records were lost in this transfer process. This problem is now being addressed by the Data Systems Division. However, the main problem is the need to understand and use two different systems to maintain the PS&D data.

If a commodity analyst in the Oilseeds and Products Division wants to know the latest forecasts of poultry production in Western Europe, he must call or visit the Dairy, Livestock and Poultry Division and obtain the data, unless he happens to know how to access the DL&P data in the PS&D.

Cross commodity comparisons are important to commodity analysts in forecasting the demand for certain commodities. A truly effective data base system would enable users to easily access the latest data maintained by another division.

The limited report generation capability of the PS&D system has been solved to some degree within the commodity divisions through the use of the FORESIGHT report writer. This software package has its own limitations and is another system the user must learn to benefit from its features.



Presently, the commodity divisions have no system that supports their statistical analysis requirements. Most statistical analysis must be done using a hand calculator. A few divisions have used the limited capabilities of the FORESIGHT package. The Statistical Analysis System (SAS), a software system on the WCC, is now being considered by at least one division as a possible tool to aid them in statistical analysis.

In order to do effective economic analysis, additional factors, such as prices, population, per capita income, etc., should also be available to enable commodity analysts to forecast trends in demand for various commodities. These data are available in the commodity divisions in hard copy files, but are not in computerized form. Thus, any true statistical analysis must be done manually, which can be a very time consuming process.

#### (d) World Trade System

WATS prior to 1977 used punched cards for entry of data to WCC computer system. Turn around time for completed error free reports, after data was entered via punched card, was about a week to ten days. In 1977 a Data Point mini-computer was introduced to eliminate punching of cards and allowed the operator to enter data inter-actively to the minicomputer. It then manages the data and arranges it into readable batch format for WCC. The mini identifies and reports operator errors the next day which are then corrected. A final report is then requested, which should be error free, and generated for the following day. This whole process takes about two days before the final report is completed.

Several problems exist with respect to the use of WATS. These include a very rigid format procedure which makes it very difficult to enter new countries into the report format. The software calculates a matrix horizontally but not vertically. Therefore, when the operator corrects an error she has to manually correct vertical grand totals. The operator should also have the capability for group deletions for error correction, she now has to correct them individually. The horizontal matrix is on a July/June year and cannot be changed without considerable effort from a computer professional. WATS is still a batch operation with a minimum two day turn around and every effort should be made to convert it to an interactive environment.

#### (e) Import Licensing System

This system currently cannot generate monthly analytical reports which show the overall status of the program. A second, and more important limitation is that the system cannot calculate license allocations for the coming year. This calculation, (which requires a review of the prior year's license allocation for each importer and his performance in fulfilling the allocation) is currently done manually. These problems are being addressed in the new system design.

#### (4) Short-Term Improvements in Current Applications

##### (a) Improved Timeliness of Data

The more timely data is, the more valuable it is to the decision maker. Commodity intelligence data obtained by the Attache that is of critical interest to FAS Washington is normally transmitted to Washington via message. However, statistical data and related analysis information is normally sent in the mail and will be received from five days to two weeks after being sent. Displays in receipt of this information and data can in turn delay forecasts by FAS economists.

This type information and data could also be transmitted to Washington and reduce current delays. However, to effectively and efficiently accomplish this a standardized message format must be developed. This standard format could be similar to the shuttle cards used today and each division could have standard formats tailored to their specific commodity information requirements. This method is used today by the Grain and Feed Division for receiving world trade data on the major grains. However, the standard format defined by the division is not always followed by the post transmitting the data. In order to eliminate this potential problem, it will be necessary to develop procedures, with examples, to illustrate the precise format of the message. Procedures should also include a quality control review to insure the data and format are correct.

Implementation of this technique, for transmitting data to FAS Washington, will pave the way for transition to the use of high speed data transmission between the Embassies and FAS.

##### (b) Improved Accuracy

Improvements in the accuracy of data, particularly statistical data is an area of critical importance. There are several causes for inaccurate data being received by FAS. These include: clerical errors, both in the preparation of the statistical tables and then in transcribing the data from one table to another, data entry or keypunching errors, errors in addition and subtraction, and errors made by other organizations providing data to FAS.

Many of these causes of errors can be eliminated if steps are taken to reduce the number of times the data is transcribed from one table or format to another manually. Thus, if statistics prepared by the Attache are prepared in machinable form, transmitted to FAS Washington and entered directly into a computer data base, probability of errors entering into the data are reduced substantially. In addition, quality control software can be written to perform various checks against the incoming data and flag possible errors that should be checked.



(c) Improved Publication Flow

The publication of FAS circulars is often delayed because of the time required to prepare many of the statistical tables and because of the time required for composition and printing by the Government Printing Office (GPO).

These delays can be reduced through the expanded use of word processing equipment for composition and table preparation. In addition, modifications to existing report generation software are required, in order to comply with current FAS publication guidelines, and thus permit generation of camera ready copy from computer files.

(d) Statistical Analysis Applications

FAS economists must occasionally perform statistical analysis of commodity statistics to derive trends in production and trade. Today, this is usually done manually, primarily because the economists do not have a statistical analysis system linked to the FAS data bases. The Department's Washington Computer Center maintains the Statistical Analysis System (SAS) and it can be used for various types of analysis. However, the economist must extract and reenter the statistical data to be analyzed.

In addition, only a few FAS economists have had training in the use of the system. Until an improved data base and data base management system can be developed, selected economists should be given training in the use of the SAS system. Steps should also be taken to extract and create separate data files in the proper formats for use with SAS.

(e) Improved Data Entry Processes

Direct data entry is now available for all commodity data. Programs are available which would allow automatic checks for arithmetic and consistency of incoming data (see discussion of quality control). With the installation of the Wang Minicomputer in late 1979, it should be possible to store 3 to 4 years of the most recent data and to permit outline updating of this data as reports arrive from the field. Besides eliminating entry bottlenecks, the new system should significantly shorten the time needed to produce a "processed" data report from several weeks to a few days or less.

(f) Efficiency of Interactive Processes

The efficiency of all interactive operations on WCC is now inversely correlated to the number of its users. Currently the system supports one hundred and ten interactive users. When all users are performing various interactive functions, the system is throttled and response time can be up to ten minutes per inquiry. A short term improvement to correct this situation would be to put up the three most recent years of data on a minicomputer so that we can by pass WCC during the day. We would be able to read and write to our files on the minicomputer during the day and then automatically update WCC files at night when there are fewer users.

(g) Increased System Flexibility

The Wang System should allow significant improvements in the ability of analysts to manipulate the data base. A high priority should be given to the development of software which allows special report generation, quick data extraction, and graphic display of data. These softwares should be "user friendly," and permit analysts to access data with a minimum of machine manipulation.

A second important area of system flexibility will be in inter-divisional data exchanges. Software should be fairly standard, permitting analysts from different divisions to access and exchange data. In addition, the system should allow electronic routing of reports -- from author to editor, and from editor to printer -- thus significantly reducing time required for publication.

(5) Long-Term Information Processing Requirements

(a) Integrated Data Base Design

There is a recognized need within FAS for the design of a new integrated data base of commodity intelligence information. The present data base of information composed of the production, supply and distribution system, the U.S. Trade System, and the World Trade System are single stand-alone systems which operate differently and do not permit merging of data between systems.

The ultimate FAS data base must include as a minimum world trade data for all major commodities, with U.S. trade data carried as a subset. (production, area and yield data, supply and distribution data,) plus prices and exchange rates, tariffs and non-tariff trade barrier information identified below under paragraph (4) (c) Expansion of Data Base.

Meteorological and satellite data maintained by the FAS Crop Condition Assessment Division will also be required in the data base in an analyzed and summarized form.

(b) Data Base Management System

In conjunction with the design of a data base, it is also necessary to analyze and determine if any existing data base management systems (DBMS) can meet the information processing needs of FAS users.

The attributes of an FAS DBMS must include the following features and capabilities. The DBMS must operate in both an interactive and batch processing mode, it should use a data dictionary/directory approach to data structure, it should be modular, permitting the addition of new data types easily. The system should also offer various levels of security access, a computational and statistical analysis capability and a versatile report generator. Finally, the DBMS should be user friendly, meaning that menus and prompts are available to enable new individuals to learn use of the system quickly.



(c) Expansion of Data Base

The FAS data base should be expanded during the coming decade to include data in the following economic areas:

Prices and Exchange Rates.

All price and exchange rate data currently maintained manually should be automated. These files should be constructed to allow cross file analysis, such as automatically generating EC prices from ECU prices and green rates. All files should be updated on at least a weekly basis; highly variable files, such as grain prices, should be updated daily.

Tariffs and NTB's.

All information gathered for the MTN's should be updated and maintained, and included in the integrated data base for use by Commodity as well as Trade Policy analysts. In addition, information on subsidies paid to producers should be included to enable analysts to develop a fuller idea of cost-of-production implications. Information on communist countries should also be available.

Economic Indicators.

Major indicators of the economic status of most countries should be maintained on a timely basis (i.e., GNP trends, cost-of-living indice, consumer income, etc.) These indicators could become the basis for predicting demand for food and fiber. In addition, analysts should have access to major economic forecast models maintained by both private and public groups.

Health and Sanitation.

All available data on additives, pesticides, and animal health requirements of post countries should be automated and updated continuously. This information should be available to commodity analysts, marketing specialists and trade policy specialists. This information should also be made available to exporters using the TORS system.

Port and Storage Facilities.

FAS economists must develop annual estimates of beginning and ending stocks of various commodities in order to develop a world supply picture. This information is often difficult to obtain because of the reporting practices of some countries. In addition, it is important for economists to know the capacity of a country to import or export a commodity through its port facilities. If factual data on port and storage facilities and capacities is developed and maintained, this information and data would be useful to commodity division economists. It would enable them to better estimate beginning stocks, and analyze the ability of a country to export a bumper crop in a given year.

Oilseed Crushing and Refining Facilities. Production of soybeans is concentrated in four major producing countries and is exported as a raw product to other countries which produce finished products in the form of meal and oil. As smaller countries begin expanding their capacity to crush soybeans and other oilseeds, they will import gradually more raw oilseeds and less finished products. In addition to reporting and maintaining data on crushings, it is important for FAS economists to know what the total capacity of a country to crush oilseeds. These data can be used to project future demands for raw soybeans and future exports of finished products. The same basic type of information on refining facilities associated with crushing plants is important.

Transportation. This requirement would be incorporated in the reporting process by the attaches. Some commodities experience transportation bottlenecks periodically and the mini-computer network should have the capability of reporting on those situations when they occur.

b. Market Development

(1) Objectives and Applications

The Market Development Program area is supported by two major data systems.

(a) Trade Opportunity Referral System (TORS)

The TORS System is an automated system designed to promote agricultural exports by matching U.S. exporters with importers who have a need for agricultural products. It supports both the market development and attache activities. Foreign trade leads are telexed to FAS/Washington by the FAS agricultural attache and entered into the system from a computer terminal in the Export Trade Services Division. They are processed daily against on-line exporter name and address and commodity files. An average of 10 trade leads per day are received which generate over 200,000 envelopes for direct mailing of trade leads to potential exporters in a year's time. The objectives of the system are (1) facilitate direct communication between buyers and sellers, (2) coordinate FAS/Washington efforts to promote sales with state departments of agriculture and FAS agricultural attache posts and (3) to maintain an automated system to facilitate follow-up of trade leads to determine resulting sales.

(b) Cooperator Projects Information System

This system is used to support market development activities. It facilitates administration of the cooperator projects program which includes 44 different market development cooperators (such as the Cotton Council International) operating in over 70 countries around the world. The data base contains historical, financial data concerning cooperator project fund availability and allocation.



The objectives of the system are to (1) assist in market development programming by providing historical analysis of the use of funds, (2) assist FAS management and cooperators in the financial management of cooperator projects, (3) maintain a historical machine readable base which can be used to answer congressional requests for information.

(2) Limitations of Existing Technology

(a) TORS

The major limitations of TORS are related to the nature of data inputting. At the present time each attache and agricultural trade officer maintains a manual importer registration list of names and addresses of potential importers of agricultural products in his/her country and the commodities they have interest in buying. Foreign importer registration lists must be sent to FAS/Washington where they are then keyed into a computer terminal for maintenance of a centralized importer registration data base. This automated U.S. supplier data base is used by FAS/Washington to generate and address automated notices advertising trade leads sent by telegraph from agricultural attaches.

(b) Cooperator Projects Information System

The system now is a good historical record of past performance. This system is limited in evaluation of cooperator market development programs because it is not easily related to current fiscal year budgets. The basic problem is the use of regional currency accounts by cooperators making country by country budgets difficult to define.

(3) Needs to Support Current Program Demands

(a) TORS

A number of short-term developmental changes could be achieved by implementing a sub-system at foreign locations using State Department minicomputers as follows:

- \* automated data management capabilities that will allow additions, changes, and deletions of the importer restriction list to be made quickly and easily through a computer terminal;
- \* automated selection and printing of gummed address labels or envelopes to be used for mailing promotional material to importers;

- \* word processing support that facilitates text preparation and editing of promotional material to be sent to foreign importers;
- \* selective retrieval of lists of foreign importers or U.S. suppliers by commodity or product group of interest and other selective criteria;
- \* generation of machine readable tapes or disks to be sent to update the centralized FAS/Washington importer registration data base.

The Long-term Developmental Changes Required are:

- \* Direct transmission of trade leads between the State Department minicomputer at each foreign post and the FAS/W computer system;
- \* Support FAS efforts to expand markets and exports by providing more current and better intelligence about the supply and demand for U.S. agricultural products worldwide;
- \* improve efforts in market promotion through TORS by facilitating better communication between attaches and trade officers with potential importers;
- \* improve prospects of sales through faster dissemination of trade leads to potential foreign buyers;
- \* save both clerical and professional time now used in manual maintenance of contracts and mailing of promotional materials which can be devoted to more productive market development or reporting activities;
- \* save clerical time in FAS/W now used to maintain foreign importer registration lists and time used to process trade leads;
- \* make information about U.S. suppliers and foreign importers more accessible to the agricultural attache and agricultural trade officer.

(b) Cooperator Projects Information System

Inputs to the system on a country budget basis to allow for month and year to date tracking and evaluation in FAS/W would make this system useful in the current fiscal year to evaluate ongoing programs.

(4) Future Program Support Needs

(a) Strategic Planning

- \* Introduction. The Market Development Program Planning Branch is being formed to prepare long-range plans by country/commodity to assure a coordinated interdisciplinary approach to major long-term agricultural export expansion.

The strategic planning process requires a thorough situation analysis to determine results and conclusions about long-term resource prioritization on a global country/commodity scale. Therefore, strategic data bases covering various subject areas broadly categorized as resources, environmental, competition and constraints will need to be established on a country basis.

- \* Short-term Development Needs.

- . Evaluation of FAS data bases for determination of feasibility and proposed modifications.
- . Preparation for access to data bases by market development strategic planning personnel.
- . Acquire and store data in readily accessible form. The assumption is that we now have within FAS most of the data needed, and within USDA, all of the data needed. Nominally, the existing FAS data bases contain a comprehensive picture of agricultural production, consumption, stocks, trade volumes, and trade policies (e.g. tariffs and non-tariff-barriers).

Provide access to existing data bases through interactive terminals in the Market Development Program Planning Branch.



### Long-range Needs.

- . The true situation is that the Market Development area now needs integrated data base.
- . General economic and demographic data were being established in an automated file several years ago. The project received low priority and was eventually abolished.
- . Outside of FAS, ESCS maintains large amounts of data oriented towards commodities and countries. Much of it originates in FAS, and much is from other sources. The decentralized organization of ESCS data processing makes it difficult to identify available data or to correlate it with FAS automated files.
- . There are some generalized approaches to report definition for selecting and listing data from each FAS file individually. The PSD has an on-line (interactive) capability. There is no common generalized manipulation language across all four files, which makes the data manipulation ineffective for most users. The data could not be meaningfully combined, in any case, because of the problems discussed above.

### (b) Agricultural Trade Office (ATO)

\* Introduction. The establishment of 25 ATO's is intended to reinforce the agricultural attache network by providing full time resources to directing future FAS market development programs. Our assumption is that the ATO will be located independently of existing diplomatic missions and they will provide operating facilities for colocation with foreign-based cooperators where appropriate.

#### \* Short-term Needs.

- . Office management-hardware to facilitate communications with agricultural attaches, FAS/W cooperator groups, et. el. as well as foreign importers and affiliates:  
 Typewriters including text editors  
 Telex  
 Copier/duplicator  
 Computer terminals with CPT printer  
 Microfilm reader/printer  
 Telephone/telecopier/fascimile equipment

- . Market development activities will include TORS system management on a regional basis with terminal access to expanding data bases.
- . Promotional activities will take advantage of video tape technology requiring video tape player/displayer system in each ATO. This will be useful for immediate indepth coverage of commodity related information for visitors to the ATO especially where U.S. team visitations are impractical.

These tapes (five minutes with voice over in language of needed if not English) will grow into a library covering all commodities for U.S. export in each ATO.

The first tape should include the benefits and features of a reliable, quality producing U.S. agricultural "machine" and should be produced using USDA resources.

\* Long-term Needs.

- . To assure rapid and accurate country information by commodity, access to a centralized data base through local terminals is desirable.

### c. International Trade Policy

#### (1) Purpose of the System: Introduction.

This system was developed to help manage and analyze the massive amount of information required to support the USDA position in the Multilateral Trade Negotiations (MTN). The objectives of the system are to: maintain trade policy information in a form that is easily and quickly accessible for automated retrieval and analysis; provide reports and analysis required to develop USDA positions on offers and requests; and provide documentation and reference data to be used in Geneva during the negotiations. Over the past year, the data base built to support the MTN was used heavily in summarization and analysis of offer and request information and retrieval and analysis tailored to specific countries in support of bilateral negotiations.

#### (a) Trade Negotiations

The Special Trade Representative relies heavily upon the Department for information and analysis used to determine what concessions should be sought from foreign governments (reduction of tariffs and non-tariff barriers to trade), the priorities to be given to concessions on agricultural products, and the extent to which concessions can be offered in return by the United States on agricultural products. In providing this information the Department must be able to identify each product of interest in each market, the particular tariff or non-tariff barriers applicable, the obligations of the importing country under trade agreements or under the General Agreement on Tariff and Trade (GATT), and the benefits that can be expected by the United States if the foreign government assumes new obligations or the cost to U.S. producers and processors if the United States assume new obligations. The Department's analysis must be defended and, if necessary, the conclusions adjusted to arrive at a joint U.S. position that is satisfactory to all interested agencies.

#### (b) Other United States Foreign Trade Policy

Apart from trade negotiations, the Special Trade Representative needs interagency advice and analysis in conducting all aspects of the United States foreign trade policy. Interagency work in this area is usually approached by the type of issue involved: Subsidies, health regulations or other technical barriers to trade, tariff and customs regulations, petitions for action against imports into the United States. Information required from the Department is similar to that required for trade negotiations.



It is also important to note that the Trade Agreements Act of 1979 requires the Government to maintain an inventory of trade barriers around the world that affect United States exports. The inventory provides basic background information for the formulation of U.S. trade policy as well as information desired by the public for normal business operations or desired to initiate a petition for U.S. government action.

Technological support is required primarily for data collection and storage. Support to the administration of the U.S. Generalized System of Preferences requires electronic storage and manipulation of certain special trade and tariff data for the United States.

The present Trade Policy Data does support or can support with minor modifications this objective insofar as the information required relates to import policies for major countries or major commodities.

(c) Information for Departmental Use

With minor modifications now planned, the Trade Policy Data Base can also be used:

- \* To respond to inquiries from the public or produce circulars or other publications which list and describe the tariff and non-tariff trade treatment of at least the most important U.S. agricultural exports to major markets. The Trade Relations Division is currently considering the feasibility of providing such information on all agricultural commodities imported into the United States, the European Community, Canada, and Mexico and for 35 to 40 important U.S. exports to approximately 50 countries (but not all of these products to all of these countries).
- \* To provide access to the trade policy information on file to anyone in FAS, especially to Commodity Programs and the Attache Service and to other agencies of the Department, such as ESCS. Provisions of this service will depend on the development of on-line capability.

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## (2) Limitations of Existing Technology

### (a) The Volume of Data

The present Trade Policy Data Base contains over 700,000 records of 120 characters each. The data base continues to grow primarily by the addition of import statistics from year to year. Tariff and trade barrier information for the most part is maintained only on a current basis -- no historical information. The present data base represents an efforts to provide complete tariff and trade barrier information and trade statistics for the United States and 17 foreign countries and minimal information needed for the MTN for selected U.S. exports to over 40 additional countries. With present technology and staff limitations, this base cannot be maintained for more than the United States and the four most important foreign countries (the European Community, Japan, Canada, and Mexico.) However, some expansion of information is planned for key commodities and countries as indicated above.

Nevertheless, no foreseeable level of personnel resources will permit expanding the data base to all commodities and all countries or even all major U.S. exports in most countries, unless electronic reporting by the Agricultural Attache can be set up in machine readable form so that essential information can be coded for use in the Trade Policy Data Base without further editing by ITP.

Moreover, no provision has been made for interactive access to the data base from terminals located in ITP or elsewhere, because the expense of maintaining this volume of information on an on-line basis has been considered prohibitive.

No effort has been made to include information on Communist countries in the Trade Policy data, primarily because these countries do not use the same kind of policies and do not assume obligations under the General Agreement on Tariffs and Trade equivalent to those of other countries. There is, nevertheless, a need to include at least basic trade information on these countries in the system.

(b) Compatibility of Data

Information in the Trade Policy Data Base is identified according to the numbering system that each country uses in its tariff schedule. No two countries have the same tariff schedule. (Many countries use the Brussels Tariff Nomenclature in which commodity identification is common to all countries in broad groups. For example, all countries using this system have tariff numbers for fresh vegetables that begin 07.01, but further identification of specific vegetables varies from country to country.) A program is now under study to make it possible to retrieve information according to the name of the commodity, such as wheat, tallow, canned peaches, etc. However, expansion of this programming to more than the 35 or 40 commodities and 50 countries now under study would be limited by inability to keep information up to date with existing personnel resources.

Because the information in the Trade Policy Data Base is identified by tariff number and description, it does not match other electronic data maintained by FAS. For example, production, supply and distribution information is maintained for rice, but most countries do not have a single tariff number for rice. Instead rice is sub-divided into a number of different products for tariff purposes, according to whether the rice is long grain, medium grain or short grain, whether it is unhusked, husked or further processed, and the extent to which broken kernels are included. It is generally not possible to break down the production, supply, and distribution information into this detail. Analytical capability will be improved to the extent this data can be integrated or at least reconciled and made mutually accessible to all interested users.

In order to support the Special Representative the Trade Policy Data Base maintained by FAS must be reasonably compatible with systems used by STR and the Department of Commerce. Since, both STR and the Department of Commerce use most of the same source material as FAS and since these agencies have not developed as elaborate a system as the FAS Trade Policy Data Base, reasonable compatibility means in practice that FAS must identify trade barriers and other information with approximately the same codes used by the other agencies, even though a number of these codes do not apply very well to agricultural products. This is not a major problem and should not interfere with further development of the Trade Policy Data Base nor its integration with other FAS systems.



(c) Different Source Material.

ITP faces a number of problems in relation to source material. The easiest source materials to use are electronic tapes containing import statistics and certain tariff and trade agreement obligation information submitted to the GATT Secretariat in Geneva by about a dozen participating industrialized countries. Because this information is on tape, it is relatively easy to transfer it to the ITP data base. However, the data are very old. ITP has only recently obtained 1976 import statistics for most of these countries.

All other information must be manually prepared. This means copying import statistics from official trade publications and trying to read and interpret tariff schedules in foreign languages. Information on non-tariff barriers and on trade agreement obligations comes from GATT documents and from attache reports, as well as official government publications. Usually this information must be carefully edited so that the electronic record will include only essential information.

(d) Personnel Limitations.

Knowing what is essential to include in the data base and knowing how to express it requires a level of knowledge and responsibility generally higher than management has been willing to recognize. Moreover, electronic reporting by attaches will increase the need for competent non-professional personnel to work with their reports.

The number of commodities and countries for which the unit can be responsible is largely a function of the quantity of personnel employed. The present Trade Policy Data Base comprises one data base manager, GS-11, two economic assistants grade GS-7, who with experience might advance up to grade GS-9 and 3 coding clerks grade GS-2 through GS-6. A fourth coding clerk has been proposed for some time, but never hired because of personnel ceilings. There is also a clerk typist now GS-4 assigned to this unit. A ratio of two coding clerks for each economic assistant employed is essential to allow the economic assistant to concentrate on more difficult work.

At present the Data Systems Division can assign only one systems analyst and one programmer to the Trade Policy Data Base. Some of their time is also required for the import licensing work related to Section 22 import quotas on dairy products. This staff level is not adequate to permit also the evaluation and necessary redesign of the Trade Policy Data Base, especially if it is to be integrated with other systems or to be expanded either in commodity and country coverage or in service to users.

(e) Security.

The Trade Policy Data Base should not be subject to any changes, additions or deletions except by Trade Policy Data Base personnel. In principal, information in the data base is available to all users, but ready access to it is limited by lack of on-line facilities. Requests for information now must therefore be submitted through the Trade Relations Division to the Data Systems Division. (Sometimes the Trade Relations Division must ask that such requests be given lower priority because of the demands already made on the Data Systems Division.)

The physical security of data has occasionally been a problem. Data maintained on temporary storage for more than a short period of time has sometimes been lost.

(f) Turn-around Time.

During the Multilateral Trade Negotiations, FAS was at a disadvantage in that new information on offers and requests for concessions could be entered into the data base, integrated with previous information, and retrieved only with about a week's delay. Because of this delay, FAS was not always able to produce reports that were fully up-to-date for consideration by advisory committees U.S. negotiators. For trade negotiations this turn-around delay should be virtually eliminated. It will also have to be eliminated if the data base is to be fully reliable for use in answer to public inquiries and for access by users outside of ITP.

(3) Needs to Support Current and Future Program Support Demands.

Technological support can be applied to this activity in at least three areas:

(a) Electronic storage of information on tariffs, non-tariff trade barriers, trade agreement obligations and related import statistics, coded in such a manner as to facilitate its retrieval by tariff number, country, type of trade barriers, tariff level, U.S. position in the market in relation to other countries, negotiating priority, etc. This was the basic purpose of the present Trade Policy Data Base.

(b) Interagency Communication. Position papers requiring interagency agreement undergo line by line and word by word reviewing and editing by the several agencies involved: STR, Commerce, Agriculture, Labor, State and Treasury, in particular. The use of interagency communications equipment for this purpose was considered a few years ago but dropped because of National security problems.

(c) Word processing equipment could be used to develop and refine draft analytical papers and tabular material. ITP now has this capability.

At present the only immediate user of the Trade Policy Data Base is the Trade Relations Division. Other parts of FAS and other agencies of the Department and of the government should be able to use this information also. Considering all of these users, the needs are for:

(a) Access by ITP to other information systems in FAS, especially the U.S. Trade System, the Production, Supply and Distribution System, and the World Trade System.

(b) On-line capability at least for tariff and trade barrier information. This capability should include the ability to request certain routine reports, as well as specific records.

(c) More source material in machine-readable form. Essentially this means appropriate development of electronic reporting by the attaches and adaptation of more current electronic data on imports and exports. (GATT tapes may have to be used for older information in order that the Department's data can be reconciled with that maintained by STR and the Department of Commerce).

(d) Word processing capability.

(e) Ability to up-date information and obtain a new report based upon it without delay. This means at least temporary on-line storage of data to be up-dated.



d. Management

(1) Current Data Systems and Applications

(a) The automated accounting system is the largest and most complex program in the management applications of data processing. It has proven to be a good system meeting the needs of the agency for external reporting and internal fund management. The system allows "batch" feeding of information on obligations and expenditures of funds by organizational unit into a disk for transmission and storage in the W.C.C. Scheduled monthly reports are programmed by the Data Systems Division to be called up from W.C.C. and made available to FAS Management.

(b) The passport control system is a record of all passports (official or diplomatic) issued by the State Department for USDA employees. The system maintains an inventory of the passports by name and number, gives expiration date of the passport, its location (FAS files-traveller - State Department), data due to be returned to FAS and, in the case of SEA employees, the status of the individual's travel clearance. The system is online and interactive with the Data point computer in Data Systems Division and is the only system which generates a report directly from FAS in-house-stored data. The reports are generated by agency and distributed to assist the agencies in controlling the passports released to them from FAS. It is a good system by concept and operation and is giant strides ahead of the manual control system that preceded it. The Travel Section enters data and queries the system directly from its own terminal.

(c) To a great extent, data maintained and reports generated for our Personnel System are duplicative of the National Finance Systems and the prospect is the FAS will discontinue maintaining the parallel system. Originally, the NFC was unable to provide timely data suited to the needs of management in FAS but gradually, NFC has improved its capacity to meet our needs and personnel ceilings will not permit our own "tailored system".

(d) Controlled correspondence in FAS is a manual operation with a series of logs being maintained to track the progress of the response to a piece of incoming correspondence. As correspondence is assigned to FAS by the Department, it is entered into a computer by Secretary's records and is maintained there until answered. Printouts of this system are available daily to FAS and as correspondence is responded to, FAS enters "location data" for Department information.

(e) The Records and Files of FAS, apart from any data base of statistical information, is not now automated. Some records (fiscal) are maintained on microfiche. There is also some limited use of microfilmed reports of international organizations. Without a standardized filing system, agency wide automation is not possible. We are saddled with a random collection of dis-similar documents which would need to be catalogued, sorted, indexed, summarized by the computer and stored either through micro form or hard copy for archives and retrieval.

(f) Word processing in FAS is not new. Initial efforts were started in 1964 with the acquisition of an MTST machine on which repetitive letters could be stored and reproduced. Ten years passed before further efforts were made to introduce word processing to an unreceptive agency. Acceptance of word processing has progressed slowly but at an accelerating rate since 1974 until we now have seven pieces of equipment owned or leased by FAS. Five are in program areas, one in Budget and Analysis Division and one in Information.

(g) Publication support is another area of office automation whose time has come because of increasing costs and restricted staff to handled greatly expanding information needs. Information is this agency's life. All the data gathered from all sources and analyzed by top professionals is no good until it reaches the "public" audience.

The greatest volume of publications coming out of FAS is in the form of the Foreign Agricultural Circular or the M-Series. Currently these are produced through a labor intensive system of type-edit-type-send to GPO for initial gally photo composition-edit-recompose and print. The photo composition done by GPO is slow and expensive (\$100 a page). To get information published on a timely basis, FAS has resorted to typed publications rather than "type-set" copy which is space wasteful and not professional in appearance.

## (2) Limitation of Existing Technology

(a) The accounting system is a complex, high volume system with high risk of human error because the data operation passes through too many hands. The human intervention permits wrong input to the system resulting in time consuming edits of error listings, loss of data and the necessity to re-input the data manually.

(b) The current operation of the passport control system is slow at times due to limited capacity of the Datapoint and its tendency to be sluggish when many programs are being utilized simultaneously. The high volume of transactions against the relatively small data base causes unusually frequent maintenance to the data base.



(c) The current personnel system has met the needs of management but has been duplicative of the NFC system and too expensive in staff time to maintain.

(d) Controlled Correspondence system is not compatible with the current or proposed FAS hardware and does nothing to assist FAS managers in following up on responses. The necessary maintenance of hand logs to track correspondence within FAS is labor intensive.

(e) Records and files. The standardization of attache reports as discussed elsewhere in this presentation is the hub around which files automation will revolve.

Our problem with automating a records and files system is hindered by a lack of expertise in the agency on available systems and procedures. This expertise could and should, initially, be contracted for but having the inhouse, "tailored" expertise would be of greater benefit to the agency in the long run to provide continuity over the years as agency needs change.

(f) Word processing. With ever increasing demands to meet information and correspondence needs with existing or fewer staff resources, interest in word processing to ease the load is expanding rapidly. The current system is a conglomerate of different types of non-connected equipment in too few locations. It is uneconomical to continue to meet the word processing needs as has been done in the past. The decision to "ride" the State Department contract for acquisition of a data processing computer and terminals permitted the expansion of the word processing capability of the agency at a relatively small increase in cost because the Wang system is a dual function (shared logic) system which permits integration of data and word processing.

(g) Publications support. The Department has had a control photo-composition unit in existence for about two years. Unfortunately, because of a contractor problems on hardware and software, the unit has not been able to assist the agencies as it had intended. Changes are not being made which will aid the agencies by taking text typed with an OCR typewriter ball and, through the Department's equipment, producing composed copy ready for camera reproduced "typesetting" on an overnight basis.



(h) Management Information System. FAS does not have a management information system; that is, a system that is specifically designed to provide top management with useful information in the necessary timeframe to make decisions and to take effective action in planning, organizing, staffing, directing and controlling the resources used in the general conduct of the business of FAS. In addition, no data system has been specifically designed to provide top management with substantive information, for example, about trade, commodities, markets, etc., that would be useful to support their role as both technical and policy advisers to the Secretary, the Administration and Congress. Some financial management information is available as a by product of the FAS automated accounting system, but little system development has been done in areas such as position control, human resources allocation, talent search, travel control, planning and budgeting. In fact, top management has not felt the need or requested the development of such a system.

(3) Needs to Support Current and Future Program Support Demands.

(a) Accounting System. This acquisition of the Wang equipment will permit direct user interaction with the data files reducing the number of hands involved and permitting direct call up of required reports. The merging of the FAS accounting system into the Central Accounting System (CAS) of the Department will still leave sizeable amounts of data from the overseas posts which will have to be in the FAS system to be merged in summary with the CAS data. Field financial reports will still be generated from the FAS system. Some ancillary data on Washington costs (i.e. travel obligations) will be kept in the FAS system to support period and estimates provided to the CAS.

(b) Passport Control. Direct interaction by the Travel Section would continue under the Wang system but the greater capacity of the minicomputer will allow faster input and recall of data and will reduce maintenance requirements for the data base.

(c) Personnel system. To meet the requirements of a Management information system certain personnel statistics will have to be identified and included in the FAS minicomputer system.

(d) Correspondence Control. The Wang minicomputer data and word processing capabilities should provide the vehicle to reduce staff requirements in tracking correspondence and provide instant recall of location data.

(e) Records and files. The expertise in records and files automation should be developed inhouse through training of staff already familiar with agency programs and filing requirements and then a plan developed building on the standardization of the attache reporting system.

(f) Word Processing. Current plans call for every program and management area to have sufficient access to terminals and printers to permit word processing to be available for virtually any application by every division in the agency. While retaining the equipment already owned by FAS for less intensive users the new system will be a "connected" system with unified training requirements.

In future years, as system use becomes more intense, there will be a need to expand the system so that every user (division, assistant administrator, etc.) would have their own terminal depending on need.

(g) Publications support. The Wang system, with the word processing capability for multiple edits at little expense of time, and the ability to interface with the Department's photocomposition equipment will speed up publication of timely information in a quality manner at one-tenth the current cost per printed page.

Publications support will thus utilize all of the capabilities of the new computer system.

- Word processing for drafting and editing
- Data processing through use of integrated data base to extract data in tabular or narrative form for publication
- The ability of the system to "dump" the drafted publication into photocomposition equipment to come up with a finished product ready for printing and distribution.

(h) Management Information System. The developments of a management information system should be a byproduct effort of the development of an overall data system for FAS. Such a system should focus on the management information requirements of the Administrator and Associate Administrator functions of FAS, and not the needs of individuals in those positions.

The general characteristics of such a system would be designed to relieve top management from having to convert data into information (e.g. information about distribution and grade level of staff, percentage of staff resources spent in leave and travel status, trade levels with a given country by commodity), provide information for decision making (e.g. decisions about spending additional funds on a given program could be supported by information about past expenditure trends and staff investments in the program), assemble information for use at meetings in a format that is usable and easily understood, and provide information giving status information on FAS efforts (e.g. trade negotiations).



### (3) Summary of Technical Shortcomings in FAS Information System

The limitations in FAS application of technology today will exist at a minimum for the next two years. The technical limitations presented are defined in the context of data input limitations, data processing limitations, data output limitations, data interface limitations, administrative support limitations.

#### (a) Data Input Limitations

There are four major limitations which hamper and make more expensive the process of entering data into the existing data basis.

(1) Attache scheduled reports are unstructured in format which consumes commodity analysts time in screening, extracting, and formatting data for input to the production, supply, and distribution data base. This expenditure of professional time is multiplied by each user of these reports.

(2) Much of the same data manually extracted from publications, listings from other agencies and foreign circulars is extracted by multiple functions for different purposes.

(3) General administrative telex and wire input is unstructured which creates a screening and extracting workload.

(4) Users cannot interact directly with most files resident on the Washington Computer Center to enter or change data.

#### (b) Data Processing Limitations

There are five major limitations which hamper and make more expensive the process of extracting data from the existing system:

(1) The majority of existing FAS files are not organized so that data can be accessed randomly as required for immediate (interactive) access of data from a terminal. This is a result of both the lack of user oriented data management systems at the Washington Computer Center and costs of interactive processing there.

(2) The file and non-interactive processing environment denies user ready availability to data of interest and if available, access is difficult.

(3) Report formats must be programmed and each revision causes delays in time and expenditure to Data System Division resources. Couple this with input problems and late and expensive reports is the result.



(4) Significant data processing power is available in the Houston facility, but is difficult and costly to access because of the physical separation.

(5) Service provided by the Washington computer center does not meet the reliability standards of FAS analysts who are pressured to meet deadlines.

(c) Data Output Limitations

There are two major limitations which hamper the process of organizing data for use:

(1) Generation of complex reports which utilize more than one data file is difficult, time consuming, costly, and in some cases impossible because of non-standard coding data bases.

(2) Output definition is the responsibility of analyst personnel who are pressed for time, and in many cases not knowledgeable of file structure. In these instances programmers must try to interpret the need and take a "shot at the problem." The result is dissatisfied user and angry programmer. More significant, a less than quality product through no fault of either individual. Many analytical problems could be solved if the analyst could "browse" through a data base and have the tools to construct his own output product.

(d) Data Interface Limitations

The system for exchanging data system between users is limited in two major ways:

(1) The most significant limitation in this area is lack of feedback to the Attache when his input has been modified or changed based on additional information. This is a critical problem in the design of a communication network interface which should allow a dialog between the Attache and his analyst counterpart.

(2) Manual data exchange among other Government agencies which have data processing capability is time consuming and labor intensive.

(e) Administrative Support Functions

The administrative support systems are limited in a variety of ways:

(1) Budget, personnel, property, and records management within FAS is a predominately manual operation.

(2) Records management and correspondence control are inconsistent across FAS and improvements are difficult to implement due to the lack of a standard indexing (filing, control, and retrieval) system. This one limitation appears to be a "bottleneck" to implementation of automated office techniques.

(3) Personnel recruitment procedures, an agency skills inventory and position management are functions that do not fully use available new technologies. Use of these techniques could release personnel and classification specialists to concentrate on performance standards, policy updates, and audited position descriptions.

(f) CCA Limitations

The CCA analytical results are not available to the Attache of a country being worked until after the fact via mail or pouch. Conversely, the Attache has no direct and timely mechanism to levy a request for condition assessment upon this unit.

Although these limitations are not exhaustive, they are indicative of experience in using the existing technology employed by FAS.

## SECTION D

MAJOR TECHNOLOGICAL SUPPORT RECOMMENDATIONS

Improvements in the use and management of information processing technology should be carried out during the coming decade in four major areas:

- IMPROVEMENT OF ANALYTICAL CAPABILITY
- IMPROVEMENT OF FIELD COMMUNICATIONS SYSTEM
- IMPROVEMENT OF SYSTEMS ORGANIZATION
- IMPROVEMENT OF MANAGEMENT SUPPORT

The presentation of these recommendations is developed with both near-term and long-range agency goals in mind. The basic premise underlying these recommendations is that FAS objectives must be supported with a more timely and more readily accessible system of information and that the existing technology and the technology that evolves over the next decade will be applied to meet these requirements.



## 1. Improvement of Analytical Capability

a. Summary. FAS is an information machine. Raw data (facts, estimates) are the input; information (summarizations, predictions, policy recommendations) is the output. The process of reducing raw data to useful information is analysis. FAS is one of the largest repositories of agricultural data in the world. Unfortunately, the data are not well organized for easy use by analysts. This section addresses:

(1) The logical organization of FAS data -- an integrated data base.

(2) The physical management of FAS data -- a Data Base Management System (DBMS).

(3) Potential for improvement in analysis.

(4) Potential for general data retrieval (inquiries) and tabular report formatting.

(5) Organizational and training recommendations.

### b. Logical Organization of Data

Given that FAS earns its bread and butter acquiring and disseminating information, the agency has a need to view its information as General Motors would view its product line--as an integrated collection of products, each product targeted to a specific market, but with many interchangeable parts. This can happen only by design, and by top management edict. Specifically, there are several major automated files in FAS, each serving a specific clientele in different ways. There is nominal overlap, or redundancy, in these files. In fact, however, the manner of classifying and coding the data makes it impossible to correlate, much less consolidate the data. These files are:

(1) U.S. Trade

(2) World Trade

(3) Production, Supply and Distribution

(4) International Trade Policy

The nature and content of these files are discussed elsewhere, and will not be repeated here. It is important to note that there is also much data used in FAS that is not maintained on automated files, thus forcing manual computation or limiting the scope of analytical work done on the computer.

Going back to the General Motors analogy, FAS should be thinking more in terms of products targeted to specific markets: producers, traders, policy planners, etc. Each product should be developed by drawing from

a common pool of "parts"—data. The analyst should not have to redevelop, or hand adjust, all the data required for his study because the variables are stored in different files, or even apply to different commodities in the same file. The time for adjustment should be at the point of acquisition, not each time it is used. And yet no substantial effort has been made to do this.

Private economic analysis firms establish statistical units that are solely responsible for the integrity and timeliness of major data elements. One copy of all documents from which such figures are taken must pass through the statistical unit. Analysts and management can rely on the assurance that the data in the files are up-to-date and documented according to pre-defined standards. The analyst is thus able to devote his time to analysis and "packaging" of his product for the client. The pre-defined definitions, however, are the crux of the matter.

Analysis is primarily an intellectual discipline, and automated computation merely follows from and supports the activity. Similarly definition, classification, correlation of data necessary for analysis are intellectual tasks. Automated data storage and retrieval must then follow the logical descriptions, or it is chaotic. This is by way of saying that management of information in FAS has a logical component that precedes, and is largely independent of, the specific tools of physical handling (acquisition, storage, retrieval) of the data. It is at this logical level that integration of the data base must begin. This in turn will facilitate file maintenance and improved analysis.

Integrated information management will require a dedicated staff plus the cooperation of all functional divisions in FAS. It will be a long-term effort to accomplish integration, and a permanent task to manage it. There are several key steps required to produce an integrated information management system.

- (1) Catalog all data now available, both automated and manual.
- (2) Identify additional needs not now fulfilled.
- (3) Work toward common (or compatible) definitions by various users.
- (4) Work toward common (or compatible) coding schemes for classification.
- (5) Provide guidance for development of an automated data base using Data Base Management System (DBMS) software.

#### c. Physical Management of Data

Use of DBMS software will greatly enhance the analytical functions performed in FAS by providing easy access to the data. Since DBMS is primarily oriented to sharing data, this technology will pay maximum return on investment only if logical integration of the data precedes its use.



This can be an evolutionary process, however. A brief discussion of DBMS technology follows.

The basic principle of a data base is rooted in a management philosophy: information resources belong to the organization as a whole, not only to the individual who acquires them or uses them. This applies where there is only one principle direct user, but is especially important where interest in end use of the resource is more widespread. Data is such an information resource.

The data processing organization acts as a custodian of data for FAS. It is a warehouse. Data should be stored and "issued" based on FAS top-management policy. Internal management of the warehouse is the responsibility of warehousing management. This is akin to the physical aspects of data base management. Keeping materials in stock, systematizing inventory accounting, pooling common needs and eliminating redundancy are functions of inventory management and control. This is akin to the logical aspects of data base management.

"A data base may be defined as a collection of interrelated data stored together without harmful or unnecessary redundancy to serve one or more applications in an optimal fashion; the data are stored so that they are independent of programs which use the data; a common and controlled approach is used in adding new data and in modifying and retrieving existing data within the data base."--James Martin, Computer Data Base Organization.

#### (1) Multiple Applications

A data base should serve multiple applications. This has important implications on the logical and physical structuring of the data.

Different applications have different "views", or combinations, of the data required for their needs. This is in apparent conflict with the need for non-redundancy. Resolution of the conflict leads to the concept of Data Independence. The data base manager structures the data in a way that is independent of any one application, but is responsive to the needs of all applications. A common software interface is used to do this. This is the Data Base Management System (DBMS).

#### (2) Batch and On-line Access

Data bases may be designed for batch processing or on-line processing or a combination of both. Most on-line systems employ much batch processing where time constraints allow because of the efficiencies and cost savings possible in batch processing.

#### (3) Non-Redundancy

Uncontrolled redundancy involves extra cost for storage and processing. Redundant data are often (or usually) "out of sync" or



inconsistent. That is, there is at best a time lag in updating multiple copies. At worst, some copies may be overlooked and not updated at all. Either case leads to erroneous reporting. A DBMS should store one copy of a data item. When it is updated for one user, it is updated for all. This, of course, implies a common, agreed definition of what the number represents.

#### (4) Growth and Change

New needs for data arise. The data base should be flexible to expand and change with minimum impact on programs. A program should be unaffected by addition or deletion of a data item not needed in that program. (This is not true of traditional file structures.)

#### (5) Management Information

Traditional computer files have been planned and implemented at the operational level, leading to fragmentation. Top-level planning and policy level decisions often require the combining of data from several (or all) operational units. Fragmented files make this so difficult as to be functionally unresponsive within the time and cost constraints. In effect, management does not have a system. A common data base gives management a system.

#### d. Improvement in Analysis

(1) Cross commodity analysis, especially in the feed-livestock sector, is one of the most critical areas for Commodity Programs. An integrated data base would allow routines which automatically produce much cross-commodity comparisons, including correlations and consistency checks, analysis of competitive products, elasticities, etc. Cross commodity programs might include land use and price data to provide estimates of acreage of competing crops, for example potatoes and grains in Europe or cotton and soybeans in the U.S. At present, lack of automated data and definitional inconsistencies require manual computations.

(2) Policy-Commodity Analysis. Trade policy analysis is not adequate unless supported by full data on trade, production and consumption. Similarly, analysis of trade trends and opportunities should take account of trade and production policies.

(3) Automated quality control—that is arithmetic and consistency checks of data presently implemented in data entry programs should be enhanced. In addition to checking for arithmetic balancing and for beginning/ending stock consistency, as presently done, substantial changes in attaches' estimates should be flagged for analyst's attention. Technical factors which can be derived from incoming data (such as calving rates, crops yields, milling rates, etc.), should be automatically generated and made available to the analyst. In addition to these checks, the quality control system should allow feedback to the reporting post if analysts have problems or comments on his reports and data. (These points are currently being addressed in the Attache Reporting System under development.

(4) Use of analytical software packages. Generalized statistical and modeling software packages require machine-readable data. An automated, integrated data base would possibly encourage the use of such packages, by making the extraction and preformatting of data less time consuming.

(5) Satellite Collection Management. Exploitation of satellite digital image data can require the processing of several billion bits of data in one crop season. (One Landsat full frame scene contains over 36 million bytes of data.)

A type of DBMS, called a collection management system, can minimize the amount of data that must be processed in the analysis of a selected geographic area. The system will maintain the status of all collection requirements for satellite data and when these requirements have been satisfied by the actual acquisition of acceptable image data, new collection parameters can be forwarded to the organization controlling the satellite. This system can also be used to change requirements and priorities for collection based on changes in weather or other events that could impact production in important agricultural regions.

e. Potential for General Data Retrieval. On-line reporting requirements can be met in two ways as follows:

(1) Inquiries

(a) Function. The system allows the user to state in non-procedural terms what he wants, based on selection parameters. The system then interprets the request, organizes a search for the data answering the specific search criteria, retrieves the data, formats the data and displays it for the user.

(b) Requirements. Software must:

- \* Handle two-way "conversation" with the user, prompting for needed information.
- \* Provide English (or English-like) language for user to input inquiries.
- \* Provide full relational expressions and full logical operations to combine relational expressions in search criteria.
- \* Not require user knowledge of physical file structures; but it may require knowledge of logical groupings for dictionary purposes. This should not require intricate tracing of structural paths by the user amounting to procedural specifications.
- \* Provide reasonable user options for specifying format of responses.



## (2) Tables

(a) Function. The system allows the user to state in non-procedural terms what he wants, based on selection and formatting parameters. The system then interprets the request, organizes a search for the data answering the specific search criteria, retrieve possibly volumunous data, provide extensive formatting and write it either to the user terminal or to a high-speed system printer.

(b) Requirements. Software must:

- \* Handle two-way "conversation" with the user, prompting if the user desires it.
- \* Provide English (or English-like) language for the user to input specifications, except that special format requirements may require special notation and desired calculations may be expressed in computational notation comparable to an algebraic expression.
- \* Provide full relational expressions and full logical operations to combine relational expressions in search criteria.
- \* Not require the user to have knowledge of physical file structures; but may require knowledge of logical groupings for dictionary purposes. This is not to require intricate tracing of paths by the user amounting to procedural specifications.
- \* Provide extensive user options for calculating "virtual" data (results not physically stored but based on actual stored data), scaling, editing and formatting output. Vector and Matrix operations are desirable. Especially desirable are the ability to transpose a two-dimensional array after retrieval but before formatting and printing, and the ability to move and do arithmetic operations on rows and columns before formatting and printing. It should be possible to define a row/column as a function of some other row(s)/column(s) or interchange the placement of two rows/columns.

## f. Organizational and Training Recommendations

The analytical ability of FAS can improve through the establishment of new organizational elements; one technical advisory group and a consolidated data support group:

### (1) ADP Technical Advisory Group

In order to begin addressing the short-term improvements presented in this paper, it is recommended that an ADP Users Group be reestablished within



FAS. This group would be composed of economists from each of the divisions in FAS. The group would include a senior staff member of the Data Systems Division and meetings would be held periodically to discuss problems with the existing system. In addition, the members of this group would coordinate for their respective Divisions the Data Processing Requirements, maintenance of Data Bases, and use of analytical packages.

With the installation of a new minicomputer in FAS, this recommendation is more important, since new plans can be tailored to meet present and future needs of the users.

## (2) Training

In addition, improved analytical capability will demand that divisions throughout FAS make a large commitment to training personnel to effectively use the information processing system. This training effort must include:

(a) Courses in machine operation, introduction to EDP, and elementary statistical concepts for all statistical personnel.

(b) Introductory courses in EDP concepts for all professionals lacking a computer background. More advanced professions should be encouraged to take courses in programming and systems design.

(c) One or more experienced commodity analysts should receive advanced training in systems analysis. On completion of training, this person could act as a trouble shooter for all commodity program EDP efforts and act as a liaison with the Data Systems Division.

(d) Training should be offered to statistical personnel who show an ability in ADP and create a separate level of statistical staff which has ADP proficiency. This new level of statistical staff would have to meet ADP requirements which would set them apart from the current staff. It would also allow FAS to hire from outside government based on those requirements. This new level should be trained in basic economics, statistics and computer programming although they will not be programming in high level languages such as FORTRAN, COBAL, RPG, etc.

f. Policy Issues Related to Analytical Improvements

(1) Staff Resources

(a) Will division management be willing and able to dedicate the resources necessary to develop a data base and then later integrated that data base? Although it will be initially time consuming the quality of the analysis FAS provides could be improved ten-fold.

(b) If the new level of statistical staff becomes a reality, will it displace functions and therefore jobs currently performed by professional economists? If the new statistical positions are approved it will provide FAS with individuals who are solely responsible for data only. They will remain in Washington and form a sense of permanence to the management and manipulation of data, which is not currently felt in FAS. The time spent by economists in the past, on those functions the new staff will provide, can then be used to perform the types of analysis which FAS must do to assist U.S. Agriculture in holding its market share of existing markets and provide information for penetration into new markets.

(2) Data Base Resources

(a) Is a common data base essential to the type of analysis FAS will be asked to perform in the future? How far should the ability for cross commodity analysis be extended and what commodities should be included? Initially the ability for that type of analysis might include grains and livestock. This performance of that type of cross commodity analysis can be monitored and graded to check on quality improvements, if any. If quality improvements are evident, then expansion in other areas should be considered.

(3) Information Dissemination

(a) What type of data will FAS have to make available to other agencies? Will FAS be relegated to a data collection agency and shift the analysis to other agencies in USDA?

(b) How will FAS protect its forecasts for all commodities when each division can access the most current data? The DSD will have to write software to protect the forecast year for all commodities. Only when publications are released will the most current forecast year numbers be available for other divisions through the system. Therefore, the public dissemination policy must be that all current forecast numbers are not available until released in an official FAS publication.

(c) How often should a magnetic tape of the data base be available to the public? Currently it is released every six months. Should this policy be continued?



## 2. Improvement of Field Communications System

### a. Introduction

Each year the importance of foreign agricultural intelligence becomes greater. During the 1980's there will be increased pressure for better and more current information about foreign supply and demand for U.S. agricultural products. For this reason, ways must be found to facilitate faster, more efficient attache reporting and two-way communications with the field. As a result of recent initiatives started by the State Department, long-term prospects for improving information exchange with the field are excellent. However, FAS actions will be dependent upon implementation of State Department plans. Therefore, the State Department plans are summarized below with the basic assumptions identified upon which FAS plans will depend.

### b. State Department Plans

The State Department plans include the implementation of standard minicomputers that will provide data processing and word processing support at all major embassies around the world. These computers will ultimately be interconnected by a communications system that will allow transfer of information between terminals connected to embassy computers and terminals connected to a compatible computer in FAS/W. The following basic assumptions are made concerning State Department deployment and implementation of equipment.

(1) Over the next five years, computers will be installed at 90-95 percent of all locations where FAS has an agricultural attache or trade officer.

(2) A communications network will be implemented over the next five years that supports medium to high speed communications between all post computers and the FAS/W computer.

(3) Each agricultural attache and trade officer will have a computer terminal and printer located in his office that will be dedicated to his support.

Based on the above assumptions, it is felt that there is a tremendous potential to upgrade information exchange with the field. As computers are deployed by State and communications facilities improved, the network will become a vehicle for FAS information exchange. The following uses are projected:

### c. Attache Reporting

Because the computers and network will be implemented gradually, there will be ample time to start with a small pilot at one of the first foreign sites supported with the new computer equipment. The proposed plans are to implement an attache reporting system in the phased approach identified below:



# (1) Development of Pilot Reporting System

The first step will be implementation of a small pilot test that covers a limited number of commodities from the London post. The pilot will make use of the new Wang computer and existing communications lines used for State visa applications. The pilot will demonstrate the following capabilities:

(a) Computer terminal support for entering, formatting, editing and storage of a limited number of commodity reports.

(b) Transmission of the reports via communications from London to the FAS computer system.

(c) Ability to access reports transmitted from London through terminals in commodity divisions for the purpose of:

- \* Editing statistics and making revisions where needed

- \* Printing all or selected parts of reports

- \* Updating production, supply and distribution files with edited data originating in London

(d) Ability to access reports through terminals in ITP for the purpose of updating trade policy files.

## (2) Expansion of Pilot

Based on experience gained in operation of the pilot at London, the system will be expanded in scope and coverage as identified below:

(a) Development of standard reporting format for all attache reports.

Standard report formats for all attache reports including statistical data and text will be identified and attache reporting instructions revised. This will include implementation of revised report numbering and identification system.

(b) The system will be enhanced by developing user oriented programs that support storage, revision, and retrieval of the most recent (3-5 years) attache reports interactively.

(c) Expand system to cover additional countries.

## (3) Ultimate Implementation at all Posts

As computers and communications facilities are deployed by State, implementation of the system would spread to all locations.

## (4) Ultimate Two Way Information Exchange

When communications facilities are fully developed, it is anticipated that provision in the system will be made to allow access to FAS data bases from attache terminals.

#### d. Electronic Mail and Message Switching

Once the communications facilities have been implemented, the technology now exists that would allow use of the FAS system and State network for two-way communications between terminals in program areas in FAS and agricultural attaches. This has the long-term potential to replace the TOFAS/FASTO system now used. The following future uses are projected:

- \* Broadcast of messages to all posts from Washington
- \* Transmit cables and letters electronically between Washington and foreign posts
- \* Allow messages to be selectively routed from one post to one or more posts

Problems associated with use of the system for the above purposes will not be related to technical capabilities as much as centralized control. Some means for attache approval of messages requesting additional work at attache posts must be devised. Approval of all messages could be done through terminal review of outgoing messages.

#### e. Satellite Communications

All present and near term communications facilities used by the State Department make use of traditional telephone communications lines. In the future it is anticipated that increased use of satellite communications will increase speed and reliability of communications and ultimately reduce costs.

#### f. Impact of Improved Communications

The use of the computer network for attache reporting and two-way communications with the field has the potential to vastly improve the reporting system, and communications with the field. The following impacts are anticipated:

- \* Improved analytical capabilities due to accessibility of more current data.
- \* Improved productivity of FAS/W analysts and clerical personnel.
- \* Reduced costs of long distance telephone calls.
- \* Automated routing of cables and messages.
- \* Faster transmission of trade leads, thus improving prospects for sales.

g. Policy Issues Relating to Field Communications Systems Improvement

(1) Coordination/message switching

At present all messages to field offices are cleared through the Attache service. With individual office terminals personnel will have the ability to communicate directly with field offices. The Attache service feels that all work demands and communications should continue to be coordinated and cleared through the area officers and/or reports officer since these officers are concerned with overall work loads, supervision and management. How will such a system operate given the volume and complexity of messages in an automated system?

(2) Standardized Reporting Format

System constraints placed in field personnel will limit narrative analysis. Attaches will be required to sharpen analytical observations and this may prove difficult for some field personnel. Training will need to be improved and more senior, experienced officers assigned.

(3) Extent of the Computerized Reporting System

Should the system be global or restricted to those posts judged important by: a) volume of imports, b) volume of exports, c) area covered, or d) domestic production? If the system is to be restricted, are there other criteria for selecting posts?

(4) Cost Benefits vs Timeliness of Information

Given other cost priorities, will the timeliness, importance and substance of the information justify replacing the present reports/TOFAS/FASTO systems at all posts.

3. Improvement of Systems Organization

a. Definition and Assumptions

Support systems, as defined for this objective are all ADP resources used for agency ADP support. These include computer hardware (equipment), software (programs), personnel, contractor services, and computer based data bases (information files). At the present time two separate data processing organizations exist, the CCA installation in Houston and the Data Systems installation in Washington. This has resulted in duplication of efforts in certain areas, physical separation of data and support systems, differences in hardware and software systems used, and less than optimum coordination between ADP organizations.



The recommendation contained in this objective is that all ADP support systems be integrated. However, before a discussion of integration can be addressed, it is necessary to identify the basic assumptions that must be made for use as general guidelines. These are identified below:

(1) FAS will continue to develop computer programs and systems for implementation on the State Department mimicomputer network for the foreseeable future and will make increased use of their network.

(2) Foreign Data will increase in importance in the formulation of domestic agricultural program and policy, causing increased access and use of FAS Data Bases by ESCS, ASCS, AMS, and the World Food Board.

(3) Trade Policy data will continue to support STR and may be accessible to STR and other Departments concerned with trade policy.

(4) There will be a continued need to make use of and/or communicate with other USDA and government computer centers, including the following:

- \* Treasury (Import Licensing)
- \* State (Network Access)
- \* Washington Computer Center (Sharing of Data)
- \* Kansas City Computer Center (P.L. 480, Credit Sales)
- \* New Orleans Computer Center (Accounting and Personnel)

(5) All equipment now or soon to be installed in DSD or CCA will be obsolete by the 1985-86 time frame.

#### b. Organization and Management of Information

A key to the future success of FAS is in its organization and management of information. In a recent article, Robert Murray predicted:

"The winners of tomorrow will be those corporations (agencies) that can react quickly in a rapidly changing environment. It takes a great effort to acquire the fleetness of foot needed to organize information in a structure which will meet user needs and an intrastructure which will allow ready access across divisional and departmental lines, indeed across continents."

The point is that agency data as recommended above under "Improvement of Analytical Capability," must be integrated and organized so that all users can access and manipulate data how and when they need it.

The heart of the problem is that at the present time there is no agency information strategy and policy. Applications are developed to support specific programs or support functions. As a result, the same data might be defined in different terms and carried in several computer files. This requires dual work in maintaining the data and programs that use it. It is inefficient for both users and the ADP organization.

### (1) Information Resource Management

This is a new name for the concept of Data Base Administration concerned with agency level planning, coordination, and control of information as an asset on a par with money, materials, and people resources. Any meaningful integration of systems can take place only by top management edict, central coordination, and FAS-wide cooperation. It is more in the realm of management science than in the traditional techniques of data processing. It is critical, however, in the acquisition and use of all other ADP resources, including hardware, software, and personnel resources. Implementation of Information Resource Management (IRM) techniques will be essential in integration of FAS Data Bases and will require:

- (a) Top management support and involvement in definition of information required for the Data Base.
- (b) Standardization of codes and definitions of information.
- (c) Use of Generalized Data Base Management System software.
- (d) Development and use of a Data Dictionary/Directory that defines and documents data descriptions and definitions.

### (2) Impacts of Information Management Integrated Data Base

(a) Improvements. The implementation of an integrated Data Base would result in the following improvements:

- \* Data redundancy would be reduced.
- \* Access to data would be easier for all users.
- \* Duplication of software and data base maintenance would be reduced.
- \* Data Base control, backup, and security would be improved and simplified.

(b) Costs. The following costs would be incurred:

- \* Standardization of all codes and data element descriptions would require a massive one time effort that would require more people and money.
- \* The selection, and purchase of Generalized Data Base Management software would be required.
- \* A formal agency Data Base Administration function would be required with top management support and participation.

(3) Issues Involved in Data Base Integration

(a) Is it feasible in a reasonable length of time for FAS to concord commodity codes and other codes used in international trading? This involves concurring Schedule B, TSUSA, BTN, SITC commodity codes with others we use internally. It took the Census Bureau over two years just to revise the Schedule B to be more compatible with TSUSA codes.

(b) How can an agency Data Base administration functions be established while two different organizations exist. If an integrated data base is to be established, even in 4-5 years, work must start soon in standardization of data elements and codes.

c. Integration of Hardware/Software and Personnel

While there is a requirement for certain special purpose hardware/software components needed for data reduction and image analysis for Crop Condition Assessment, there are many ADP support requirements that are common to both CCAD and DSD. Because of the present organizational and physical separation of the two organizations, no attempt has been made to purchase ADP equipment, software, or other services that can be shared by both organizations. This has resulted in lack of standardization and less than optimum economies of operation. Some of the impacts and issues to be considered are identified below:

(1) Impacts of Hardware/Software/Personnel Integration

(a) Hardware Impacts

- \* More hardware will be available in one location for use by all of FAS.
- \* Hardware associated with some external communications linkages can be eliminated with a result of improved access times to selected data sets. Communications costs for data communications between Houston and Washington will be eliminated.
- \* Diverse hardware systems can be evaluated side-by-side as input to future procurements to enhance total capabilities.



- \* Distributed minicomputer philosophy can be maintained under this approach with enhanced capabilities through processor load leveling and/or selective upgrading of components.
- \* Hardware down-time should be more easily accommodated because of an increased number of hardware components being physically available.

(b) Software Impacts

- \* Common design, programming and maintenance standards can be established and enforced by management. This should result in more consistent methods of system development and maintenance of only one set of standards.
- \* Multipurpose software tools such as statistical packages, stored graphic formats, econometric model forms, report writers and data base browse routines can be stored in a library available to all FAS users without duplication.
- \* Man-machine interactive software can be implemented which allows coordination and data exchange among all FAS users, thereby reducing the amount of internal correspondence and coordination meetings.
- \* Varying levels of summations from the multiuse data base and computer graphic software can be utilized as a Management Information System for division directors and above.
- \* A full range of software query capability can be implemented for use by the attache in answering questions concerning crop conditions, trade restrictions, import/export histories by country, market potentials by country and trade referrals.

(c) Personnel Impacts

- \* Recruitment, training, performance indicators and position descriptions can be standardized for all FAS data processing personnel.
- \* Better utilization of technical talent can be realized through consolidation of hardware and application of one common software system.
- \* A one-to-one interchange concerning new application of technology can be maintained with FAS user personnel through consolidation of hardware, software and services.
- \* Travel costs between Houston and Washington will be eliminated saving both personnel time spent traveling and travel costs.

(d) Facility Impacts

- \* A consolidated FAS facility is necessary to achieve the previously defined impact capabilities.
- \* Facility management and physical security are enhanced under this consolidation/integration approach.
- \* Cost of separate facility power and environmental controls is reduced or at least zero balanced.

(e) Contractor Services

- \* Value for dollar expended on contract equipment maintenance is increased significantly through a single location and stable equipment configuration.
- \* A single point of technical control of all contractor services is possible under this approach.

(f) Management Impact

- \* Management overhead can be reduced through integration of support services.
- \* Span of control and coordination is improved immediately.
- \* Critical long-range planning can address overall agency needs rather than unique program needs.

The impacts on FAS user support capabilities discussed in the preceding paragraphs are by no means exhaustive. The discussion is meant to capture the major tangible benefits to user personnel and FAS management through integration of all support services. These benefits can only occur if serious long-range planning rules are followed: 1) establish clear-cut and concise agency objectives; 2) develop a realistic time-phased plan to achieve the objectives; and 3) top level management commitment to provide necessary resources in the execution of a plan.

d. Policy Issues Relating to System Integration

While most of the impacts listed above are advantageous, there are several important policy issues that must be answered:

(1) Organizational Issues

The current organizational structure would not now lend itself to integrating the DSD and CCAD functions since the two divisions report to different assistant administrators. Therefore the following issues must be resolved:

- \* Where should the integrated organization be placed in FAS? In the past the ADP organization has been under the Administrator, Commodity Programs, and Management.

- \* What changes, if any in the ADP organization and mission will be brought about by the integration of word processing and data processing, and communications?

## (2) Departmental Issues

- \* Must certain FAS Data Bases be maintained on Departmental equipment to insure common access? If not made available through Departmental computer centers, FAS must operate a service center that can be used by other agencies. This would be in direct competition with Departmental computer centers.
- \* What part of FAS work should remain on Departmental computer centers? Could we get the Department's approval to pull completely out of the computer center? Does FAS want to operate a computer center that operates 24 hours/day to provide the same type overnight processing service given by the Department?

## (3) Compatibility Issue

If existing hardware now used by DSD and CCAD is ultimately replaced, compatibility must be maintained with State minicomputers. The State Department plan is projected over ten years, and the assumption is made that they will be committed to Wang.

## (4) Funding Issues

Integration of FAS support services will require an increase in funding levels over a period of 5-7 years. Given Departmental and GSA delays in procurement cycles, FAS single-year funding will be a serious constraint to achieving planned target dates during this time frame.

Personnel skills and numbers determine success or failure in any application of technology. The skill level and numbers of ADP personnel in FAS are not adequate to achieve the goal of integrated services.



#### 4. Improvement of Management Support

##### a. Office automation

Objectives in the area of office automation can be as far reaching as the imagination could wander. This is not a reasonable nor attainable approach to take. For the purposes of this exercise, the objectives are presented in a fairly general manner and described under three broad headings: 1) word processing, 2) records and files and 3) publications support, all of which are closely inter-related.

(1) Word processing. The Wang system should be expanded throughout the agency with the purchase of additional terminals and printers to permit all organizational elements use of the system. The overseas offices should be included in this network as rapidly as possible depending on the speed at which State Department moves to install equipment at the embassies.

The system, as described earlier, will increase productivity by putting all repetitive typing (multiple originals) in memory for recall; editing of correspondence, reports, regulations, speeches, etc., will be done via the T.V.-like screen (Cathode Ray Tube or C.R.T.) on which words or lines can be electronically changed, deleted or moved from one location to another in the document; thereby eliminating the need for multiple typing.

The system will be able to merge the data from an automated data base with original narrative or other input from the user, to produce finished products tailored to the needs of the user. The produced document, in preparation stage, should be transportable from one CRT to another for review, approval, or editing.

As overseas offices come into the system, and as State Department permits, there should be an interaction capability with Washington and between posts to transmit information. This will, of course, be dependent on equipment and software capability and cost effectiveness.

The installed system will include standardized training so that an individual can move organizationally with no loss of productivity.

(2) Records and files. The records and files program for the agency should both complement and supplement a data base of information. It should retain appropriate documents and provide for easy retrieval of those documents. It should be accessible by all organizational units of the agency including the overseas posts. The system should have an index with a global search ability by key word or subject which would give the user all pertinent files on the subject.

(3) Publications support. As noted, the proposed system will integrate word processing and data processing. This will combine "original" writing with tabular statistical data to develop a publication. A further step should be the ability to develop and incorporate

charts and graphs with text and tabular data by the author for inclusion by a photocomposition facility in the finished publication.

b. Office Automation Implementation Requirements

(1) Word processing. The first priority is recognition of the need for a core of operators thoroughly familiar with all of the intricacies of the equipment and software who are able to manipulate the system to meet the needs of the organization to which assigned. This core should include secretaries and young professionals who will be going overseas on assignment. The initial training program should include the maximum number of people possible and be designed to provide a surface knowledge of the system. Those initially trained will lack the in-depth familiarity with the machines and will become proficient once they have sufficient time on the system. The training must be an ongoing process to reinforce skills that otherwise will dissipate without constant use.

The use of the system must be monitored, reviewed and evaluated to get the best use out of the capabilities of the system.

In addition to acquisition of additional terminals and printers over the next five years we must acquire the necessary additional software to permit station-to-station communications automatically. Additional terminals and printers should be acquired at the rate of about 3 per year at a cost of \$30,000 per year for five years. To permit this increase in the word/data processing system, the Wang equipment currently being installed must be upgraded for additional capacity at a cost of \$72,000 in FY 1981.

(2) Records and files. The first priority is to get someone trained in the state of the art on equipment, procedures and techniques of establishing a micrographics program. After the training, the next logical step is a feasibility study to determine what needs to be microfilmed and how; what methods of retrieval are best suited to the agency needs and who has access to the files.

The training and study will take a dedicated staff year and should be done in FY 1981.

(3) Publications support. The first step will be the interface of the Department's photocomposition unit with the FAS Wang system in FY 1980.

There is in FAS the necessary equipment to design and prepare charts and graphs using the computer capabilities of the Wang system. The use of this equipment will require another education program. Mid-level professionals in the program areas will need to be trained in the use of this equipment which should not involve more than two day's training per person. This can be accomplished starting immediately and, although ongoing in nature, then would be a core of individuals capable in using the equipment in FY 1980.



c. Management Information System (MIS)

A Management Information System should be developed for use by top management in FAS. The system should be developed on the basis of a careful study of the management information requirements of the FAS executive staff. In addition, in developing the common data base for FAS, the data requirements for the MIS should be considered.

The specific elements of the MIS should provide top management with quick access to information that will serve the following purposes:

(1) Status Information. This information will provide current knowledge, for example, about U.S. export trade values and volume, key production numbers, major tariff levels, and negotiation offers on key issues.

(2) Problem Information. This information will provide knowledge about a current crisis (e.g., shipping strike) or a major project (e.g., Trade Office implementation).

(3) Information for Outside Dissemination. This is summary information for review before the final public release (e.g., world wheat production estimates).

(4) External Intelligence. This is information about the U.S. or foreign economic environment (e.g., inflation levels), commodity prices, or competition export volume and values.

(5) Internal Operations. This information would provide knowledge about financial management matters (e.g., amount budgeted, amount spent, amount available), personnel matters (e.g., number of people authorized and on board, grade and salary levels, locations).

In addition, distant future consideration should be given to the use, by top level managers, of econometric models for forecasting trends (e.g., export levels), planning new efforts (e.g., exports of new commodities), and operations planning (e.g., number of employees required for a major effort such as the MTN).

There are four types of MIS tools which should be explained for use in the system. These are: 1) query systems for retrieving information, 2) the use of graphics to aid comprehension, 3) the use of analysis routines for analyzing data and possibly 4) the use of decision models that either describe or prescribe solutions.

Finally, the MIS should be geared to help: reduce interruptions, reduce scheduled meetings, aid the executive's memory, improve dissemination of information to subordinates, and aid desk work.



## SECTION E

IMPLEMENTATION RECOMMENDATIONS AND RESOURCES IMPLICATIONS

The steps and resources required to achieve the short and long-range improvements in the application of information processing technology to FAS programs and operations are outlined in this Section. The steps and resources required are presented by major recommendations.

1. Implementation PlanImprovement of Analytical Capability

Implementation of this function involves organizational changes as well as a long-term management commitment to centralized planning and control of the information resources of FAS.

a. FY 80(1) Actions

(a) Establish and staff the Data Base Administration (DBA) function. Begin identification of present information resources (automated and manual) and agency needs. This will result in a data element dictionary.

(b) The DBA and Data Systems Division must review needs and available DBMS software packages, including automated data element dictionary software. This will result in the selection of DBMS and DED packages to satisfy near-and-mid-term analytical needs. At the end of five years, a reevaluation should be made to upgrade or replace software packages based on advances in hardware/software.

(c) Establish one analytical software specialist (with a backup) in DSD to coordinate acquisition and implementation of all analytical functions (e.g. statistical packages, modeling packages, etc) within the total systems development framework.

(d) Establish an ADP Users Group consisting of professionals and paraprofessionals from each division in FAS, with an advisory member from Data Systems Division. For this purpose a new position should be established in each commodity division, ITP, MD, etc. for coordination of data processing requirements, maintenance of data bases, and use of analytical packages.

(e) Establish an FAS modeling/analysis activity to determine specific needs and methodology and to provide expertise to the rest of FAS (economists, marketing specialists, personnel staffing specialists, management, etc.) and to work in coordination with the DSD analytical software specialist.

(2) Impact on Resources

(a) Personnel

1 additional ceiling required to staff Data Base Administrator function.

1 additional ceiling required to staff analytical software specialist position.

5-7 ceiling required for new division ADP coordinators, unless existing positions are converted.

(b) Budget

. \$100,000 for acquisition of software packages.

. \$ 5,000 additional training costs.

b. FY 81

(1) Actions

(a) Implement procedures for use of generalized packages (DBMS, analytical, and report writers) by personnel throughout FAS. Emphasis will be on user-oriented languages, with interactive access where possible.

(b) Begin definition of common data base requirements and structure. Work on standardization of coding structures for correlation of existing files. Make any expansions of existing data base possible in accordance with this definition. This will involve:

- \* Full time staff person under Data Base Administrator.
- \* Possible contractor support for completion of standard codes in two years.
- \* Subject matter support from divisions as required.

(c) Implement partial PSD and U.S. Trade data on Wang hardware to support data entry validation and high priority on-line analysis functions (e.g. transportation analysis).

(2) Impact Resources

(a) Personnel

1 additional ceiling in DBA function to coordinate standardization of codes.

(b) Budget

\* \$200,000 for contractor costs -- code standardization and software development.

\* \$ 5,000 additional training costs.

c. FY 82

(1) Actions

(a) Complete standardization of codes.

(b) Continue development and expansion of common data base.

(c) Continue development of analytical techniques; purchase of graphics hardware and software.

(2) Impact on Resources

(a) Personnel - no increases.

(b) Budget

\* \$200,000 contractor for code standardization and software development.



\* \$25,000 graphics terminal and software.

\* \$ 5,000 additional training costs.

d. FY 83-85

(1) Actions

(a) Continued development and expansion of common data base.

(b) Continued enhancement of analytical expertise and software support as necessary.

(2) Impact on Resources

Non projected.

2. Improvement of Field Communications System

a. FY 80

(1) Proposed Actions

(a) Develop and implement pilot test of commodity reporting system with London.

(b) Develop and implement pilot test of TORS application with three posts.

(c) Evaluate operation of pilot tests.

(2) Impact on Resources

(a) Personnel

An estimated 1 man year per pilot test will be used to develop and implement the systems. This will divert two man years from other applications.

(b) Financial

Increased costs will include:

State Department equipment	\$15,000
Communications costs	3,000
Travel costs	4,000
	<u>\$22,000</u>

b. FY 81(1) Proposed Actions

(a) Development of standard reporting system  
for all reports.

(b) Expansion of pilot to 10 countries.

(2) Impact on Resources

Personnel - Additional personnel resources  
required will be obtained through contracts.

(a) Financial

Anticipated costs include:

1. State Department equipment	\$45,000
2. Communications Costs	20,000
3. Travel costs	10,000
4. Contractor costs	100,000

c. FY 82-85(1) Proposed Actions

(a) Reporting system implementation of reporting  
system to 50 posts by 1985.

(b) Personnel

It is anticipated that to act as liaison and to  
coordinate software implementation at foreign locations at least 1-2 people  
will be required when all posts are implemented.

(c) Financial

Anticipated annual costs for use of computer and  
communications facilities at 50 State Department facilities are estimated below:

Equipment use	\$225,000
Communications costs	100,000
Travel costs	50,000
Other	25,000

### 3. Improvement of Systems Organization

#### a. FY 1980

##### (1) Proposed Actions

Complete 5-year ADP plan through joint involvement of CCAD and DSD.

##### (2) Impact on Resources

No significant input in personnel numbers or expenditures is expected other than increased travel costs associated with the joint planning effort.

#### b. FY 1981

##### (1) Proposed Actions

(a) Moving responsibility for management of both functions to the same Assistant Administrator.

(b) Joint development of common ADP standards to be used by both DSD and CCAD.

(c) Promoting cross training of personnel.

##### (2) Impact of Resources

Moderate increases over current levels are expected for travel between Washington and Houston.

#### c. FY 1982

##### (1) Proposed Actions

(a) Link CCAD and DSD computers in Washington through telecommunications.

(b) Select a pilot project to demonstrate feasibility of the use of CCAD equipment and software to support a DSD application in Washington.

(c) Implement pilot and evaluate results.

##### (2) Impact on Resources

Equipment and communication costs not anticipated to exceed \$25,000. No more than 2-3 man months of effort are anticipated for pilot.



d. FY 1983(1) Proposed Actions

(a) Study alternative locations for setting up a single FAS computer facility in the Washington area.

(b) Select location.

(2) Impact on Resources

No significant impact.

e. FY 1984(1) Proposed Actions

(a) Establish task force with joint representation from CCAD and DSD to study combined hardware/software requirements.

(b) Document combined requirements for hardware and software to replace existing facilities.

(2) Impact on Resources

Primary impact of the above actions will be that it will displace other work with 1-2 man years devoted to the requirements analysis.

f. FY 1985(1) Proposed Actions

(a) Prepare solicitation documents, obtain all approvals, and release RFPs for procurements.

(b) Select hardware and software vendors.

(2) Impact on Resources

Primary impact will be in 1-2 man years of work required for completing the procurement cycle.

g. FY 1986(1) Proposed Actions

(a) Reorganize CCAD and DSD into single ADP organization.

(b) Install new equipment.

(c) Begin conversion.

(d) Operate parallel systems at old and new facilities until conversion can be completed.

(2) Impact on Resources

There will be major impacts in all areas as a result of the one time costs of equipment purchases and conversions. Because the costs of hardware and software will be set six years into the future, it is difficult to project costs. However, it can be assumed that one time costs will be sufficiently high that provision should be made for spreading costs over several years through use of the Department's Capital Improvement Fund or through multi-year funding. During the period of parallel operation, space and facility costs will also be double. Costs of moving personnel will also be substantial.

Impact on ADP personnel numbers will depend upon what kind of facility FAS elects to set up, and how much use can be made of Departmental computer centers. If we elect to operate a completely independent computer center, more ADP personnel will be required to staff a three shift computer center. If FAS continues to rely on Departmental computer centers for overnight work and other work that can be done on centralized equipment, fewer if any additional personnel would be needed.

4. Improvement of Management Support

a. FY 1980

(1) Proposed Plan

(a) Install Wang computer system in Data Systems Division to provide management support of data entry, remote job entry, word processing, and systems development.

(b) Implement word processing support for all FAS program areas and management.

(c) Convert Passport Control and Accounting Systems to Wang equipment.

(2) Impact

(a) Personnel

The first year will require conversion of all applications from existing Datapoint equipment to Wang. This will displace other work and thus impact all areas.

(b) Financial

Equipment costs were incurred with FY 1979 funds, so most one-time costs have been borne, however, the following associated costs are expected:

Associated furniture and supplies	\$ 9,000
Additional equipment	\$15,000
Maintenance for 6 months	\$18,000
Training Costs	\$20,000

b. FY 1981

(1) Proposed Plan

(a) Upgrade Wang system to increase the number of word processing terminals and printers that can be supported.

(b) Add word processing terminals in MSD and Management Analysis.

(c) Increase the number of word processing printers by five.

(d) Install direct communications link from Wang system to the Departmental photocomposition unit.

(2) Impact on Resources

(a) Personnel

Impact on personnel will include time required to help train users and develop procedures and software required to allow users access to the Wang system. This is expected to require one half man year of effort in the Data Systems Division not counting conversion time for existing applications.

(b) Financial

Additional equipment and maintenance costs are estimated at \$130,000, however, they will be offset by a reduction of about \$75,000 in annual rental costs if it is possible to phase out the Datapoint and Data 100 equipment by the end of FY 1980. This would be a net increase of \$55,000 for FY 1981.







FAS MANAGEMENT CONFERENCE

TALENT REQUIREMENTS

FOR THE FUTURE

November 28, 1979





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## ANALYSIS OF THE PRESENT FAS WORKFORCE

### A. Numbers

From a personnel standpoint, FAS is not growing. The total number of FAS employees has averaged between 710 and 770 for the last 10 years, except during a 2-year period when P.L. 480 and Commercial Export programs (now in OGSM) were part of FAS and the total reached 875 (Table 1). Expansion of FAS staff appears unlikely in the near future, except through the absorption of another agency or portion of an agency -- OGSM once again, for example. The staff acquired in such a merger, however, would come to FAS with established functions and responsibilities, limiting the program flexibility which might otherwise result from a major expansion of FAS employment.

About one out of every five FAS employees is a foreign national. This proportion -- and the absolute number of foreign national employees, ranging only from 139 to 147 -- has been remarkably stable for the last decade. The number and proportion of professionals in the FAS workforce has risen in the last decade, with a corresponding decrease in the clerical/support staff segment of the workforce. This has been true both among U.S. citizens and foreign nationals (Table 2). Gradual replacement of support staff positions with professional positions can be explained by the stingy



personnel ceilings, generous budgets, and expanding program responsibilities which have shaped agency development for a number of years.

The nonforeign-national FAS workforce totals 615 employees, divided organizationally into 5 broad program areas and 24 divisions (not including foreign posts), and occupationally into a large number of professional, paraprofessional, and clerical job classifications (Table 3). The distribution of employees by classification varies considerably among program areas (Tables 4 and 5). However, this distribution is one of job descriptions as much as it is one of skills and qualifications. Job descriptions are readily tailored to the qualifications of the incumbent, and movement among categories for staff members with agricultural economics backgrounds is very easy.

FAS presently employs 1.8 professionals for each support staff worker, and 2.5 professionals for each secretarial/clerical worker. As noted, these ratios have been increasing. They vary by program area (Table 6), reflecting in part the great differences in staff organization and function among programs.

#### B. Hiring Patterns

Despite stable numbers overall, FAS has sufficient turnover to require -- and enjoy the benefits of -- the recruitment



of a steady stream of new employees. FAS has hired 483 people in the last 5 years, or about 97 people each year. Of this number, 167 (33 per year) were U.S. professionals, 202 (40 per year) were U.S. clerical/support employees, and 114 (23 per year) were foreign nationals. In terms of average staff levels in the last 2-3 years, this hiring rate could provide a complete turnover of the U.S. professional staff in about 11 years, a complete turnover of foreign national staff in 6 years, and a complete turnover in U.S. clerical/support staff in about  $5\frac{1}{2}$  years. Of course, differences in longevity among employees provides more continuity than these numbers imply.

The FAS clerical/support staff attrition rate has averaged about twice that of the professional staff attrition rate in recent years (Table 7). Professional staff attrition has exceeded 3 percent in only one quarter during the last 5 years, and that was the quarter during which OGSM departed. Clerical staff turnover has ranged from 13 to 28 percent (annual basis) in recent years, with a record single quarter attrition rate of 9.3 percent in the third quarter of 1979.

Accessions and separations show no particular monthly pattern (Figures 1 and 2), indicating that the FAS recruitment and hiring process, both for professionals and support staff,

must be a fairly evenly distributed year-round activity.

The proportion of new staff members hired in the last 5 years for different program areas (Table 8) roughly corresponds to the size of those program areas in the agency, with the exception of the Attache Service, which staffs most attache positions from within the agency as a matter of policy. Larger-than-proportional hiring levels by Commodity Programs and International Trade Policy reflect in part the need to "staff up" for the LACIE/CCA project and the MTN, respectively.

In comparison with all those hired in the last 5 years, the employees who left FAS in less than 3 years were more likely to be at lower G.S. grade levels, female, and minority group members (Table 9). This may say as much about competing job opportunities in the current hiring environment as it does about the identification of "permanency risks." High minority and female turnover rates have important implications for the goal of achieving increased minority and female representation on the FAS workforce.

The largest number of professional employees who joined FAS in the last 5 years and left in less than 3 years started out in Commodity Programs and Management. Commodity Programs was also the first assignment for 40 percent of the professionals hired in the last 5 years. Management was the first assignment for 22 percent of the professionals hired in the last 5 years,

and about one-third of these left within 3 years. (However, this does not imply a high overall turnover rate for Management; on the whole, it is one of the most stable areas in the agency.) The divisions which lost the largest number of new hires within 3 years were LACIE (due in part to the transfer of a number of professionals to ESCS), Grain and Feed, Personnel, Trade Operations (ITP), and Reports and Statistics.

C. The Professional Workforce

There are no outstanding gaps in the age distribution of the FAS professional workforce, though it could be seen as somewhat light in the early forties range (Figure 3). The distribution is not unlike that for the population as a whole -- somewhat weighted toward the "baby boom" years. By FY 1983, 85 members of the present FAS professional workforce of about 360 will be eligible to retire. At present, about 50 professionals are eligible to retire.

The geographical distribution of FAS professional employees shows the largest numbers born in the most populous states, with the exception of California (Table 10). Proximity to Washington has obviously played some role in who came to work for FAS, with Virginia, Maryland, and the District of Columbia, overrepresented in relation to their populations, and very few professional staff members from the West. Among



regions where FAS professionals were born, the South predominates.

The record shows creditable progress in increasing female and minority representation in the FAS professional workforce over the last 10 years (Table 11), particularly considering the small proportion of women and minority group members who have received training in professional areas such as agricultural economics from which we have tended to hire.

The proportions of minority and female employees in professional jobs has increased significantly -- as have the proportions of males and nonminority group members (Table 12). This "professionalization" of all groups at once has been made possible by the increase in percent of professionals in the workforce as a whole. The slight downturn in 1979 figures for minorities and women in both Tables 11 and 12 shows the vulnerability of progress in this area to high turnover rates and small numbers.

A tabulation of how long present FAS professional staff members have been working in their current areas of specialization shows a large number who have been in one area for 10 years or more (Table 13). Management is the program area with the most experienced personnel at this time; ITP is the program area with the least.

The hypothesis of a decline in expertise in the FAS workforce is not necessarily disproven by evidence that there are

lots of people in FAS who have been working in the same area for a long time. The key question is whether more capable younger and mid-level professionals are specializing, since FAS will be known by the skills of a relatively small number of key professionals, in any case.

Does FAS reward the development of expertise? Of FAS professionals at G.S. 15 or above, 45 percent have been in their present areas of specialization for more than 10 years, and the average number of years in the area of specialization for this group is about the same. However, 55 percent have therefore been able to reach G.S. 15 without 10 years in one area, and 25 percent of our G.S. 15's have less than 3 years in their present FAS specializations.

#### D. Younger Professionals

An analysis of some characteristics of FAS professionals 35 and younger, with particular attention to those in this group hired in the last 5 years, provides some evidence of de facto hiring policy in recent years (Table 14). Younger members of the professional workforce are slightly more likely to be female and minority group members than the professional workforce as a whole. They are more likely to have been born in the Northeast, and less likely to have been born in the Midwest or South.

About half of the younger professionals hired in the last 5 years came from universities, and most of the rest came from government jobs. Four out of five have at least a masters degree, and about half have agricultural economics degrees. Very few of the agency's professionals who are 35 or under are in the Foreign Market Development program area. A relatively high proportion of those hired in the last 5 years have gone into ITP. About 3 out of 10 are in the Attache Service at this time.



TABLE 1

## Average Number of F.A.S. Employees by Category

1970-1979 1/

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u> <u>2/</u>	<u>1975</u> <u>2/</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
U.S. Professional	321	332	323	313	386	399	354	357	360	364
U.S. Clerical	235	238	219	216	278	304	246	232	231	197
Foreign Nationals <u>3/</u>	142	144	139	142	145	144	140	143	143	147
Other <u>4/</u>	21	32	44	39	29	28	28	37	41	44
Total	<u>719</u>	<u>746</u>	<u>725</u>	<u>710</u>	<u>838</u>	<u>875</u>	<u>768</u>	<u>769</u>	<u>775</u>	<u>752</u>

1/ Derived by averaging actual quarterly figures available.2/ F.A.S. included P.L. 480 and Commercial Export programs presently under QGSM.3/ Includes clerical and professional.4/ Contract, part-time, temporary, etc.

TABLE 2

Percentage Breakdown of F.A.S. Work Force  
by Category, 1970-1979

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u> <sup>1/</sup>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u> <sup>2/</sup>
<u>Regular employees</u>										
<u>U.S. Citizens</u>										
Professional	44.6	44.5	44.6	44.1	46.1	45.6	46.1	46.4	46.5	48.4
Clerical	32.7	31.9	30.2	30.4	33.2	34.7	32.0	30.2	29.8	26.2
Total	<u>77.3</u>	<u>76.4</u>	<u>74.8</u>	<u>74.5</u>	<u>79.3</u>	<u>80.3</u>	<u>78.1</u>	<u>76.6</u>	<u>76.3</u>	<u>74.6</u>
<u>Foreign Nationals</u>										
Professional	8.6	8.4	10.1	10.7	9.2	8.9	10.1	10.6	10.6	11.5
Clerical	<u>11.1</u>	<u>10.9</u>	<u>9.1</u>	<u>9.3</u>	<u>8.1</u>	<u>7.6</u>	<u>8.1</u>	<u>8.0</u>	<u>7.9</u>	<u>8.0</u>
Total	<u>19.7</u>	<u>19.3</u>	<u>19.2</u>	<u>20.0</u>	<u>17.3</u>	<u>16.5</u>	<u>18.2</u>	<u>18.6</u>	<u>18.5</u>	<u>19.5</u>
<u>Other</u> <sup>3/</sup>	<u>2.9</u>	<u>4.3</u>	<u>6.1</u>	<u>5.5</u>	<u>3.5</u>	<u>3.2</u>	<u>3.6</u>	<u>4.8</u>	<u>5.3</u>	<u>5.6</u>

1/ OGSM within FAS.

2/ First 3 quarters.

3/ Contract, part-time, temporary, etc.

F.A.S. Staff<sup>1/</sup> in Various Employment Categories by  
Program Area and Division, Sept. 22, 1979

TABLE 3

	2/ Admin.	Ag. Mtg. Specialist	Ag. Economist	Int. Economist, Economist	3/ P.R. Specialists	4/ Computer Specialists	5/ Program Specialists	6/ Management Specialists	Foreign Ag. Affairs Officers	Trainees	Statistical Assistants	7/ Other Para-Prof.	8/ Secretarial/Clerical	Other Non-Prof.	TOTAL
<b>ADMINISTRATOR</b>															
Office of Ad. Information	7				13					1		2	4		11
Total	7				13					1		2	4		16
<b>FOREIGN MKT. DEV.</b>															
Office of A.A. Planning & Eval.	2						1						2		5
Export Tr. Services		6	1				5				2		5		19
Total	2	10					6				2	1	8		19
<b>COMM. PROGS.</b>															
Office of A.A.	2	1	1				1		1	3			4		13
O & P	1	2	7						2		4		5		21
G & P	1	6	16	1			1				3		11		39
DL & P	1	7	11	1			2		1		3		12		38
T & C	1	5	4						1	1	4		8	2	26
H & TP	1	6	8	1					1		4		6		27
CCA			6			11	6	1				2	8		35
Total	7	27	53	3		11	10	1	6	5	18	2	54	2	199
<b>INT. TRADE POLICY</b>															
Office of A.A.	2		1				1						3		7
Trade Relations				7		1	1						7	2	18
Dev. Countries				4			1						3		8
Dev'd. Mark't. Ecs.			1	7									3		11
Cent. Pl'd. Ec's.			1	5									4		10
Total	2		3	23		1	3						20	2	54
<b>MANAGEMENT:</b>															
Office of A.A.	2												2		4
Mgmt. Services							20			2		14	15	4	55
Budget & Anal.							11						2		13
Personnel							14			1		5	9		29
Data Services						17				6			1	4	28
Total	2					17	45			9		19	29	8	129
<b>ATTACHES</b>															
Washington	2	2	1						6			2	6		19
Overseas 1/									113				31		144
Total	2	2	1						119			2	37		163
<b>TOTAL</b>	22	45	58	26	13	29	19	46	125	15	20	26	159	12	615

1/ Excluding foreign nationals. 2/ Administrator, Ass't. Administrator, Deputy AA, Confidential Assistant (Job titles: Foreign Agricultural Affairs Administrator, Administrative Officer, Foreign Agricultural Affairs Officer). 3/ Public Information Officer, Public Information Specialist, Writers, Editors. 4/ Computer Specialist, Programmer, Systems Analyst, Mathematician. 5/ Program Analyst, Special Projects Officer, Production Specialist, Program Specialist, Import Quota Manager, Representation & Foreign Visitors Coordinator, International Organizations Officer, Geographer, Soil Scientist, Expert. 6/ Administrative Officer, Procurement Officer/Specialist, Office Services Manager, Traffic Manager, Accountant, Budget Officer/Analyst, Management Analyst, Personnel Officer, Personnel Mgmt. Specialist, Personnel Staffing/Class. Specialist, and related fields. 7/ Ass't. Positions (Mail Ass't., Fiscal Ass't., Employee Development Ass't., Reports Ass't., Program Assistant, Reports/Message Analyst, Publications Support Positions, Voucher Examiner, Computer Operator, Technician positions. 8/ Includes all secretarial, typing, clerical and clerk positions.



TABLE 4

F.A.S. STAFF 1/, IN VARIOUS EMPLOYMENT CATEGORIES, BY PROGRAM AREA,  
September 22, 1979

	: Professional :	: Paraprofessional :	: Sec./Clerical: Blue Collar :	: Total :
Administrator <u>2/</u> .....:	21	2	4	27
F.M.D. ....:	25	3	15	43
C.P. ....:	123	20	56	199
I.T.P. ....:	32	---	22	54
MGMT. ....:	73	19	37	129
Attaches.....:	124	2	37	163
	398	46	171	615

1/ Not including foreign nationals.

2/ Including Information Division.

TABLE 5

Percent of F.A.S. Staff in Various Employment Categories in  
Each Program Area, Sept. 1979

	Administrators	Ag. Mktg. Specialists	Ag. Economists	Int. Economists	P.R. Specialists	Computer Specialists	Program Specialists	Mgmt. Specialists	For. Ag. Affairs Officers	Trainees	Total Professional	Statistical Assts.	Other Para-prof.	Total Para-prof.	Secretarial/Clerical	Other Non-professional	Total Non-professional
	Percent																
Administrator	26	0	0	0	48	0	0	0	0	4	78	0	7	7	15	0	15
Foreign Mkt. Dev.	5	37	2	0	0	0	14	0	0	0	58	5	2	7	35	0	35
Commodity Programs	4	14	27	2	0	6	5	*	3	3	62	9	1	10	27	1	28
Int. Trade Policy	4	0	6	43	0	2	7	0	0	0	59	0	0	0	37	4	41
Management	2	0	0	0	0	13	0	35	0	7	57	0	15	15	22	6	28
Attaches 1/	1	1	0	0	0	0	0	0	69	0	76	0	1	1	0	23	23
All Program Areas	4	7	9	4	2	5	3	7	20	2	65	3	4	7	26	2	28

1/ Excluding foreign nationals.

\* Less than 1 percent.

F.A.S. PROFESSIONAL/SUPPORT STAFF RATIOS BY  
PROGRAM AREA, September, 1979

	: Professional/:	
	: Secretarial :	Professional/
	: & Clerical :	Support <u>1/</u>
Administrator <u>2/</u> .....:	5.3	3.5
Foreign Market Development.....:	1.7	1.4
Commodity Programs.....:	2.3	1.6
International Trade Policy.....:	1.6	1.5
Management.....:	2.5	1.3
Attaches <u>3/</u> .....:	3.4	3.2
	2.5	1.8

1/ Including paraprofessional and blue collar.

2/ Includes Information Division.

3/ U.S. citizen employees only.



TABLE 7

Attrition as a Percent of F.A.S. Work-Force <sup>1/</sup> by Quarters,  
1974 (4th Quarter) to 1979 (3rd Quarter)

	1974				1975				1976				1977				1978				1979			
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
Clerical	5.4	3.0	2.6	4.8	2.2	4.1	2.3	4.9	5.5	6.1	5.5	6.5	5.8	6.2	4.4	6.4	6.4	3.2	8.6	9.3				
Professional	1.9	1.2	1.3	3.5	2.2	4.7	2.1	1.6	1.8	0.1	2.7	1.6	2.4	1.6	*	3.2	1.6	1.6	1.5	1.3				
Total	2.7	2.0	3.5	4.0	2.2	4.3	2.0	2.7	3.2	2.9	3.6	3.4	2.9	3.1	2.0	4.2	3.3	2.1	4.1	3.9				

\* Less than 0.1 percent.

<sup>1/</sup> Including foreign nationals.

<sup>2/</sup> Departure of OGSM.

F.A.S. Professional Acquisitions by Program Area and Division, 1/  
10/74-9/79

TABLE 8

	<u>Number</u>	<u>Percent of Total</u>
<u>Administrator</u>		
Office of Administrator .....	8	4.8
Information .....	4	2.4
Total .....	<u>12</u>	<u>7.2</u>
<u>Foreign Market Development</u>		
Office of Asst. Admin. ....	1	0.6
Planning and Evaluation .....	7	4.2
Export Trade Services .....	1	0.6
Total .....	<u>9</u>	<u>5.4</u>
<u>Commodity Programs</u>		
Office of Asst. Admin. ....	0	0.0
Oilseeds and Products .....	8	4.8
Grain and Feed .....	16	9.6
Dairy, Livestock and Poultry .....	7	4.2
Tobacco and Cotton .....	5	3.0
Horticultural and Tropical Products .....	6	3.6
Crop Condition Assessment .....	25	15.0
Total .....	<u>67</u>	<u>40.1</u>
<u>International Trade Policy</u>		
Office of Asst. Admin. ....	0	0.0
Trade Relations .....	8	4.8
Developing Countries .....	1	0.6
Developed Market Economies .....	15	9.0
Centrally Planned Economies .....	6	3.6
Total .....	<u>30</u>	<u>18.0</u>
<u>Management</u>		
Office of Asst. Admin. ....	2	1.2
Management Services .....	5	3.0
Budget and Analysis .....	0	0.0
Personnel .....	10	6.0
Data Services .....	19	11.4
Total .....	<u>36</u>	<u>21.6</u>
<u>Attaches</u>		
Washington .....	1	0.6
Overseas .....	8	4.8
Total .....	<u>9</u>	<u>5.4</u>
<u>Discontinued Areas 2/</u> .....	<u>4</u>	<u>2.4</u>
GRAND TOTAL .....	167	100.0

1/ Acquisitions for divisions subsequently merged are attributed to the succession division and program area.

2/ OGSM programs; other severed functions.

Characteristics of Professionals Hired in Last 5 Years,  
Compared with Those Who Left FAS in Less Than 3 Years

	<u>All Hired in Last 5 Years</u>	<u>Hired in Last 5, Left in Less Than 3</u>	<u>Percent Who Left in Less Than 3 Years</u>
<u>G.S. Grade</u>			
5	2	-	0%
7	10	7	70%
9	60	11	18%
11	20	6	30%
12	19	4	21%
13	26	3	12%
14	17	2	12%
15	10	2	20%
16	2	1	50%
17	-	-	-
18	1	-	0%
<u>Sex</u>			
Male	134	24	18%
Female	33	12	36%
<u>Minority Status</u>			
Minority	17	6	35%
Non-Minority	150	30	20%
<u>Program Area</u>			
Administrator <u>1/</u>	12	4	33%
Foreign Mar. Dev. <u>2/</u>	9	2	22%
Commodity Programs	67	11	16%
Int. Trade Policy	30	7	23%
Management	36	11	31%
Attaches	9	1	11%
Programs No Longer in FAS	4	-	-

1/ When hired.

2/ Including Information Division.



TABLE 10

Birthplaces of F.A.S. Professional  
Employees, September 1979

Northeast

Maine	6	
New Hampshire	2	
Vermont	0	
Massachusetts	14	
Rhode Island	0	
Connecticut	7	
New York	26	
New Jersey	14	
Pennsylvania	26	
Total	95	(26%)

Midwest

Ohio	16	
Indiana	5	
Michigan	4	
Illinois	16	
Missouri	5	
Iowa	5	
Wisconsin	10	
Minnesota	6	
North Dakota	7	
South Dakota	4	
Nebraska	8	
Kansas	6	
Total	92	(25%)

South

Delaware	1	
Maryland	15	
Virginia	10	
West Virginia	3	
Kentucky	3	
Tennessee	10	
North Carolina	13	
South Carolina	2	
Georgia	8	
Florida	6	
Alabama	6	
Mississippi	5	
Louisiana	3	
Arkansas	4	
Oklahoma	4	
Texas	12	
Total	134	(37%)

West

Montana	4	
Wyoming	0	
Colorado	1	
New Mexico	0	
Arizona	0	
Utah	3	
Idaho	1	
Washington	1	
Oregon	2	
Nevada	0	
California	8	
Total	20	(6%)

District of Columbia 29 (8%)

U.S. Territories, Foreign  
Countries 21 (6%)

TOTAL 362 (100%)

TABLE 11

Female and Minority Representation in FAS  
Workforce 1/, 1970-1979

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Percent Female in:										
Professional Work-										
force		14	14	14	15	16	17	16	19	17
Support Workforce	12	91	90	92	92	91	90	96	97	94
Total Workforce	46	47	45	46	47	48	47	47	46	45
Percent Minority in:										
Professional Work-										
force		4	6	6	7	8	9	10	11	9
Support Workforce	3	30	33	38	43	42	46	45	45	45
Total Workforce	29	16	17	20	22	22	24	23	25	23
	14									

1/ Excluding foreign nationals.

TABLE 12

Percent of FAS Employees<sup>1/</sup> in Professional Positions  
by Sex and Minority Status, 1970-1979

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Percent Professional Among:										
All employees	57	57	59	58	58	57	59	61	61	63
Male employees	93	93	93	93	94	90	93	97	92	96
Female employees	15	17	18	17	18	19	21	21	24	23
Minority employees	10	14	20	18	19	20	22	23	27	25
Nonminority employees	64	66	68	68	67	68	71	77	71	74

<sup>1/</sup> Excluding foreign nationals.



TABLE 13

FAS PROFESSIONAL WORKFORCE 1/: EXPERIENCE IN  
PRESENT AREA OF SPECIALIZATION

Average Number of Years in Area	ADMINISTRATOR 2/	F.M.D.	C.P.	I.T.P.	MANAGEMENT	ATTACHES	TOTAL FAS
	7.34	7.97	6.15	4.09	9.37	6.41	7.66
Percent of Professionals in Area for:							
-- 3 Years or Less	30%	28%	50%	74%	22%	44%	44%
-- 4 to 9 Years	40%	38%	26%	12%	39%	30%	29%
-- 10 Years or More	30%	34%	24%	14%	39%	26%	27%

NOTE: In most cases, only work within FAS is considered experienced in the area of specialization. Similar activities outside FAS, or work in another area within FAS, may be background for the present job, but it is not considered experience in this context. Only Attache Service experience is counted as experience in present area of specialization for present Attaches and Assistant Attaches.

1/ Excluding foreign nationals.

2/ Includes Information Division.

SELECTED CHARACTERISTICS OF FAS PROFESSIONAL STAFF  
35 YEARS OLD AND YOUNGER

	ALL PROFESSIONALS 35 AND YOUNGER		35 AND YOUNGER, HIRED SINCE 1975	
<u>SEX</u>				
Male	84	(79%)	55	(79%)
Female	22	(21%)	15	(21%)
<u>MINORITY STATUS</u>				
Minority	13	(12%)	8	(11%)
Non-Minority	93	(88%)	67	(89%)
<u>BIRTHPLACE</u>				
Northeast	38	(36%)	25	(36%)
Midwest	16	(15%)	13	(19%)
South	27	(25%)	19	(27%)
West	7	(7%)	5	(7%)
Dist. of Columbia	13	(12%)	4	(6%)
U.S. Territories, Foreign Countries	5	(5%)	4	(6%)
<u>PREVIOUS OCCUPATION</u> 1/				
University	48	(45%)	34	(49%)
Government	47	(44%)	30	(43%)
Industry	8	(8%)	5	(7%)
Not Employed	3	(3%)	1	(1%)
<u>EDUCATION LEVEL</u>				
High School	2	(2%)	1	(1%)
A.A.	1	(1%)	0	(0%)
B.A./B.S.	23	(22%)	11	(16%)
M.A./M.S.	74	(70%)	52	(74%)
Law Degree	1	(1%)	1	(1%)
Ph.D.	5	(5%)	5	(7%)

ALL PROFESSIONALS  
35 AND YOUNGER

35 AND YOUNGER,  
HIRED SINCE 1975

MAJOR 2/

Agricultural Economics	50 (47%)	41 (59%)
International Studies	17 (16%)	7 (10%)
International Economics	2 (2%)	2 (3%)
Economics	6 (6%)	1 (1%)
Agriculture	2 (2%)	0 (0%)
Geography	3 (3%)	3 (4%)
Management (Business Fields)	8 (8%)	2 (3%)
Computer Related Fields	4 (4%)	4 (6%)
Law	1 (1%)	1 (1%)
Meteorology	1 (1%)	1 (1%)
Other	12 (11%)	8 (11%)

FAS PROGRAM AREA

Administrator 3/	5 (5%)	4 (6%)
Foreign Market Development	4 (4%)	1 (1%)
Commodity Programs	41 (39%)	30 (43%)
International Trade Policy	16 (15%)	16 (23%)
Management	10 (9%)	7 (10%)
Attaches	30 (28%)	12 (17%)

1/ Immediately preceding employment by FAS.

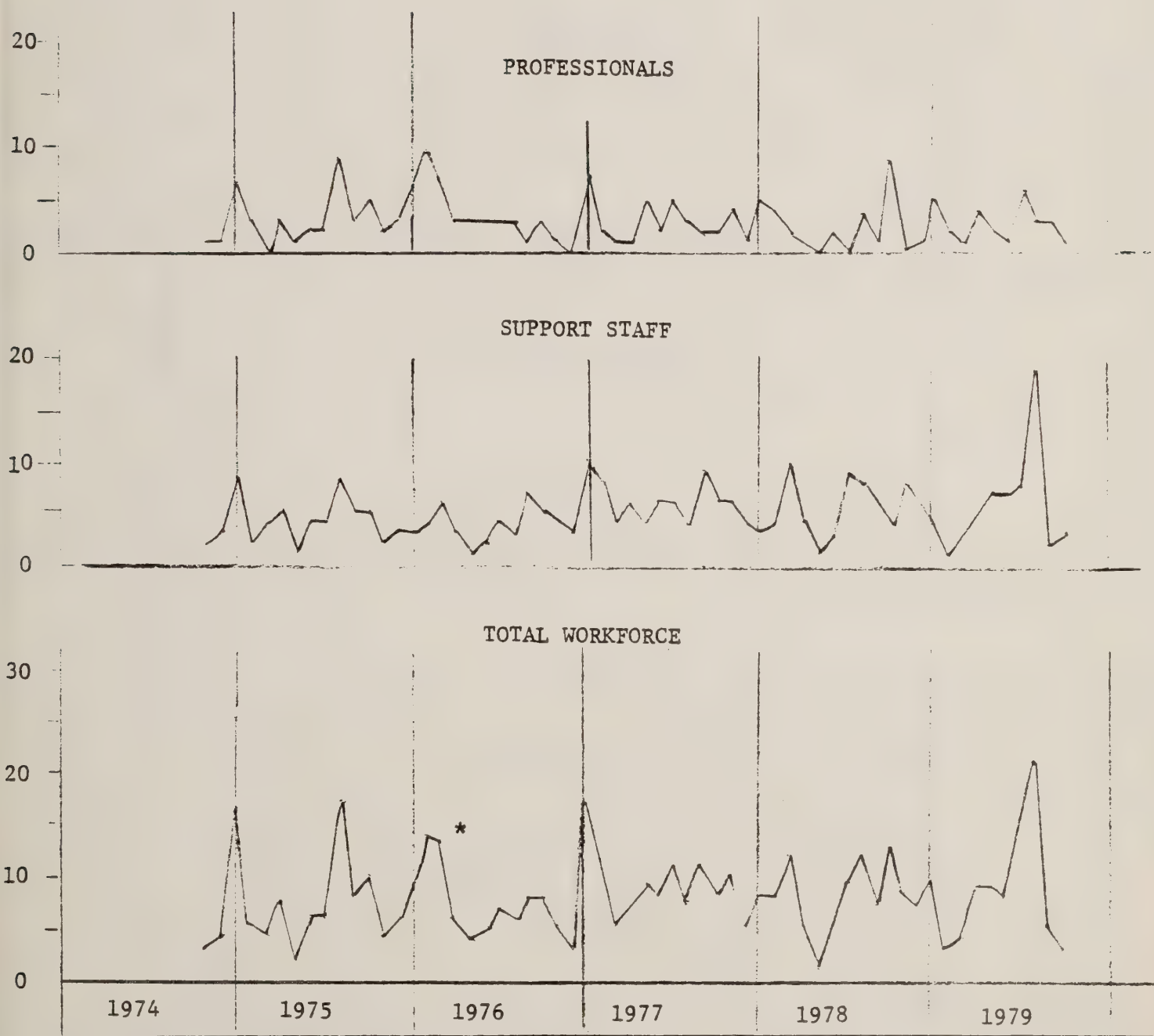
2/ Highest degree completed.

3/ Includes Information Division.



NUMBER OF SEPARATIONS FROM F.A.S.

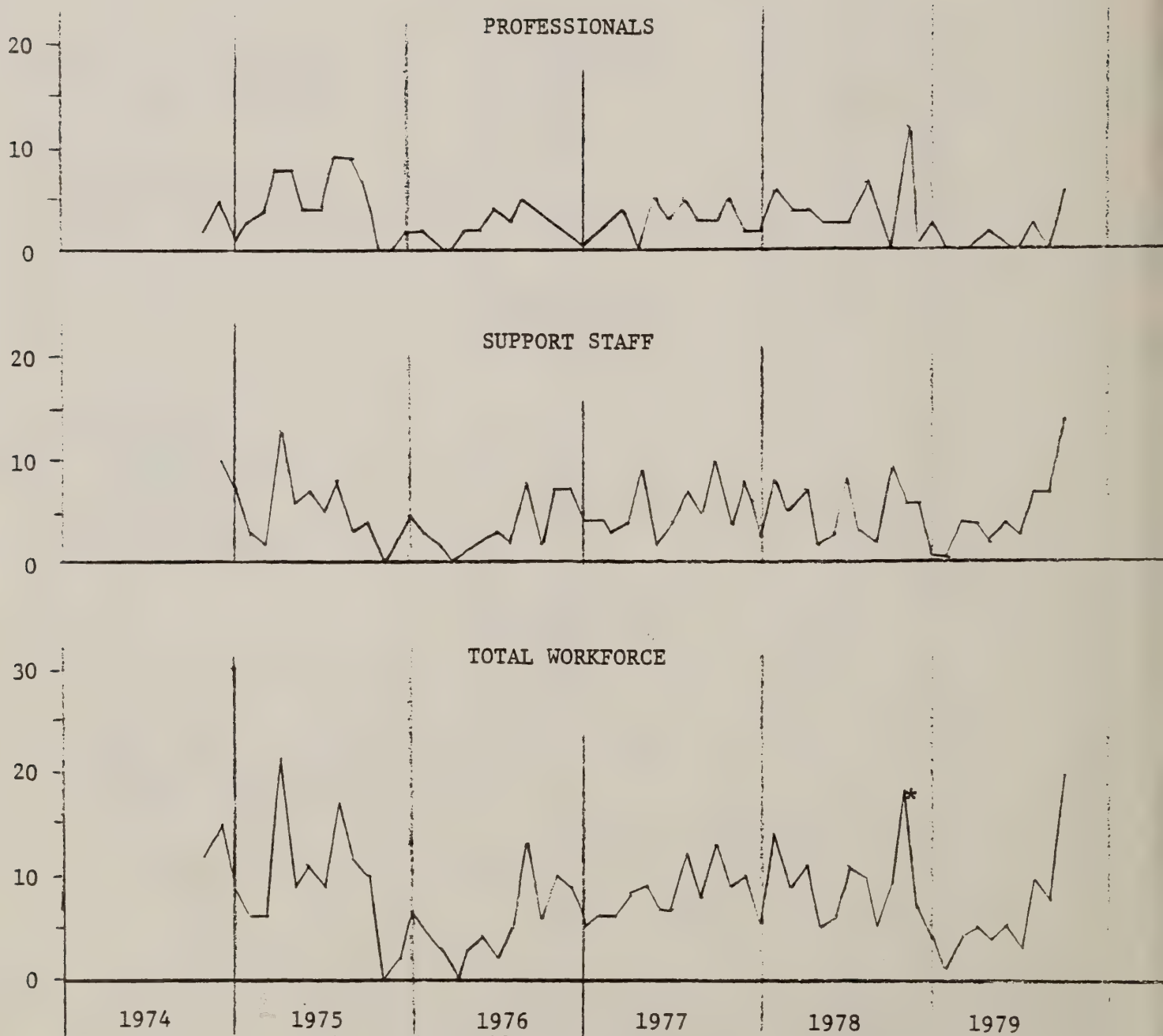
WORKFORCE BY MONTH, 10/74-9/79



\*11 transfers to OGSM

NUMBER OF ACQUISITIONS BY F.A.S. BY

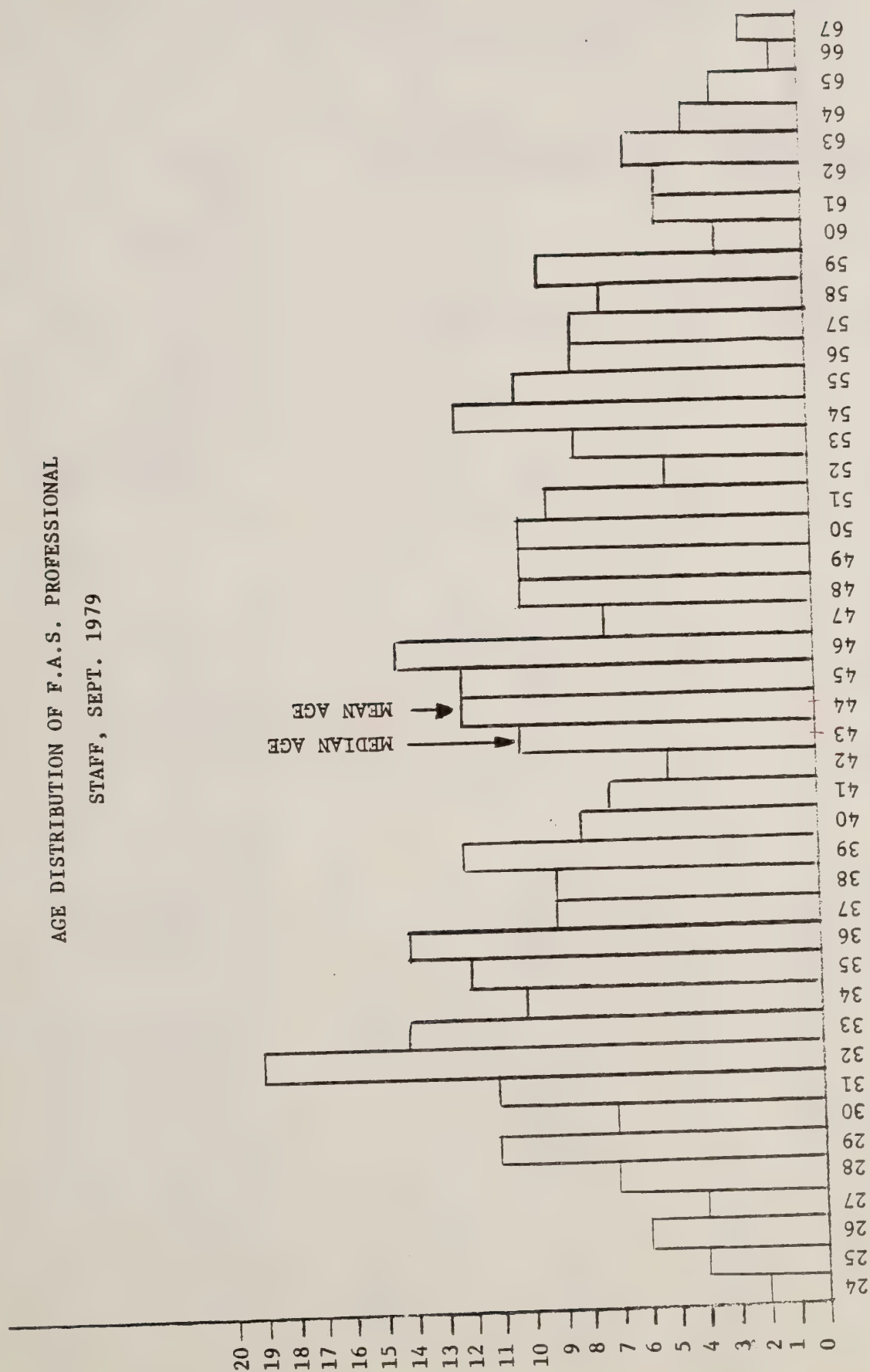
MONTH, 10/74-9/79



\*10 Lacie Acquisitions

FIGURE 3

AGE DISTRIBUTION OF F.A.S. PROFESSIONAL  
STAFF, SEPT. 1979



Note: Ages as of Dec. 31, 1979



TABLE 13

FAS PROFESSIONAL WORKFORCE 1/: EXPERIENCE IN  
PRESENT AREA OF SPECIALIZATION

	<u>ADMINISTRATOR 2/</u>	<u>F.M.D.</u>	<u>C.P.</u>	<u>I.T.P.</u>	<u>MANAGEMENT</u>	<u>ATTACHES</u>	<u>TOTAL FAS</u>
Average Number of Years in Area	7.34	7.97	6.15	4.09	9.37	6.41	7.66
Percent of Professionals in Area for:							
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1/ Excluding foreign nationals.

2/ Includes Information Division.

SELECTED CHARACTERISTICS OF FAS PROFESSIONAL STAFF  
35 YEARS OLD AND YOUNGER

	<u>ALL PROFESSIONALS</u> <u>35 AND YOUNGER</u>		<u>35 AND YOUNGER,</u> <u>HIRED SINCE 1975</u>	
<u>SEX</u>				
Male	84	(79%)	55	(79%)
Female	22	(21%)	15	(21%)
<u>MINORITY STATUS</u>				
Minority	13	(12%)	8	(11%)
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<u>PREVIOUS OCCUPATION</u> 1/				
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Government	47	(44%)	30	(43%)
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<u>EDUCATION LEVEL</u>				
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Ph.D.	5	(5%)	5	(7%)

ALL PROFESSIONALS  
35 AND YOUNGER

35 AND YOUNGER,  
HIRED SINCE 1975

MAJOR 2/

Agricultural Economics	50	(47%)	41	(59%)
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Law	1	(1%)	1	(1%)
Meteorology	1	(1%)	1	(1%)
Other	12	(11%)	8	(11%)

FAS PROGRAM AREA

Administrator <u>3/</u>	5	(5%)	4	(6%)
Foreign Market Development	4	(4%)	1	(1%)
Commodity Programs	41	(39%)	30	(43%)
International Trade Policy	16	(15%)	16	(23%)
Management	10	(9%)	7	(10%)
Attaches	30	(28%)	12	(17%)

1/ Immediately preceding employment by FAS.

2/ Highest degree completed.

3/ Includes Information Division.



## ANALYSIS OF CURRENT HIRING PROGRAM

### A. Constraints (Can we hire?)

The first step in the hiring process is obtaining the authority to hire. The Office of Management and Budget gives USDA a personnel ceiling; the Secretary divides it among his deputy and assistant secretaries, and they in turn--working with the Department's budget people--allocate ceilings to the USDA agencies under their control.

FAS is currently governed by four ceilings. The first two are dictated by the Department. Permanent, full-time FAS employees are limited to 753 in FY 1980. This total represents an increase of 23 persons over FY 1979, 13 for the trade offices and 10 for training positions. A second departmental ceiling covers "other" categories, which is other than permanent full-time employees and student aids. Currently, some 25 "other" persons are authorized to be employed in FAS, and FAS supervisors do not feel fully informed regarding the limitations in hiring "other" employees. Two additional ceilings, relating to employees at our attache offices, are technically allocated by OMB but are in fact handled through an interagency committee dictated by State Department. This process of determining overseas assignments is known as MODE. The committee determines embassy ceilings for U.S. citizens and foreign nationals and allocates these ceilings to individual departments, where they are managed by departmental budget agencies. Hence, USDA must decide how to break down embassy representation among APHIS, FSQS, FAS, etc. If FAS wishes to

change its representation at a particular embassy, we have to go to State (through USDA) to get its blessing. State, in turn, will check with the ambassador before deciding. Success in dealing with State on this issue has been questionable.

Within FAS, personnel ceilings are broken down by program area. However, there is a considerable difference between actual ceilings and those ceilings prescribed in the Position Management System at the start of the year, and program areas complain that they never really know their ceilings. Hence, they lack the essential information for planning their hiring policies.

Ceilings are important since they represent the level of persons that must be attained at the end of the fiscal year, consistent with budgetary limitations. These two factors are inseparable in those cases where program areas never exceed their ceiling during the year. This is a non-issue; in fact, the program areas probably will be below ceiling at the end of the year due to unforeseen attrition. However, other program areas seek to manage their staffing levels by operating above ceiling during the year and relying upon anticipated attrition to get them down to ceiling levels by the end of the fiscal year. While this is a legitimate managerial approach and does attain the targeted ceiling level, it may conflict with the FAS budget--which is pegged to the ceilings and may not be able to absorb the above ceiling staffing curve desired by assistant administrators. The parties involved in the inevitable negotiations over this issue--assistant administrators, Personnel, budget professionals--need to consider the

other side's problems.

It should be possible for FAS to determine a staffing curve by program area (and for the agency as a whole) prior to the beginning of each fiscal year. Were that the case, supervisors could better plan their staffing, foresee staffing deficiencies, and more adequately plan work activities (i.e., Standards of Performance). Currently, such a situation is not the case.

B. Management Policy (Who is hired? How?)

The FAS Personnel Assignments Committee (PAC), whose activities are defined by FASR, is the agency's top level personnel board. This group, but identified as "mini PAC", meets every other Tuesday, at the beginning of pay periods, and--based on current ceilings, recent separations, and requests for personnel--decides which FAS program areas can hire during the next two weeks. The decisions apply to specific division positions within the program areas. Assistant administrators specify in their request the division and grade of the slot to be filled, and, if there is more than one in any program area, the slots are ranked by priority. Thus, the PAC decides "who can hire?" It plays no role in determining "who is hired?" except in some cases where overseas assignments are being filled from outside the agency.

The assumption is made that the PAC attempts a rational approach to rating and meeting the personnel needs of the agency and that assistant administrators carefully analyze the hiring needs of their divisions before each PAC meeting.



In fact, there is often little preparation for PAC meetings and dominant personalities are the major factor behind PAC decisions. Hence, it matters less which divisions are in greatest need than which person yelps the loudest and the most often.

A second key factor in the hiring process is the Position Management System, an annual schedule of positions that can be justified for the various program areas. Although few division directors play an active role in the development of this report, it spells out the grade structure for each division for the next year and provides certain limits upon new hires and especially promotions. It is updated each December.

As with the PAC, however, there is a considerable difference between the intent of the Position Management System and its actual performance. A glaring example of this situation is the current abundance of GS-14's within the Agency. FAS/Washington has 14's hanging out the windows. How did we get so many? Could there have been a breakdown in coordination between the grade levels prescribed by the PMS and the system by which FAS professionals are promoted and attaches rotated?

A third factor regarding hiring--and one which often is misunderstood--relates to hiring of minorities. There are no quotas for the hiring of minority applicants, nor are there any exceptions to the hiring process. It is true that minorities are somewhat under-represented in the FAS professional work force, but this situation relates more to job specification than to intent of those doing the hiring. Personnel does feel

a moral responsibility to attempt to make the FAS work force representative of the national population, and in pursuit of of this goal Personnel writes all identifiable graduating, minority agricultural economists. In the end, FAS seeks to hire the best candidates available; but, regardless of final choices, FAS has to be able to justify its selection criteria and FAS supervisors need to know management's intent regarding minority hiring at the start of the year.

Once the decision has been made to hire to fill a vacancy and qualified applicants are interviewed, the question arises, "who makes the hiring decision?" Most FAS managers at least give lip service to the basic managerial concept of having group leaders and division directors be an integral part of the hiring process, so that they are given authority commensurate with their responsibility. Under such a system, assistant administrators would make the final hiring decision but would not hire applicants not wanted by the immediate supervisors. In practice, however, this concept often is ignored. Hiring decisions are sometimes whimsical, with an assistant administrator or deputy saying "yes" after a cursory interview and the division director being unaware that the applicant even exists until the individual reports for work on Monday morning. In some cases the new hire still does a good job, but when he/she does not, the immediate supervisor resents being blamed for the poor performance of someone he never wanted.

To sum up, the current FAS practices for interviewing and hiring job applicants follow no absolute guidelines. They vary from program area to program area depending upon the personalities of assistant administrators and division directors. Even within program areas, the process varies from day to day.

C. Methods Used in Recruitment (Where are they?)

Given the FAS interest in hiring predominantly agricultural economists, much of Personnel's recruitment effort is aimed at the 50 land grant schools of the Morrill Act plus the 17 additional "1890 schools" that have been added to the Act. Other schools are considered which produce agricultural economists or international economists. The chief Personnel recruiter makes two one-week recruitment trips per year to colleges, half of which time is targeted for minority recruitment. In addition, he attends the annual AAEA Conference, where there are a number of job applicants. FAS professionals from the program areas are encouraged to combine recruitment efforts with their domestic travel, but there have been few results from this approach.

Second method of recruitment is the cooperative education program, under which students work for FAS while still in school. There are three types. First, undergraduate students working toward a degree can work full-time with FAS for two separate periods totaling at least 26 weeks. Upon obtaining their degree, they can be hired non-competitively. Second, graduate students can be hired for a total of at least 16 weeks, utilizing one or more periods to reach this total. There is a third program for hiring local high school students.



There are advantages to this program, such as non-competitive hiring and the opportunity to observe applicants in a work situation before hiring them. The disadvantages are that we often have to rely on professor recommendations (rather than personal interviews) in selecting the students; the supervisory problems of giving meaningful work to a 6-month employee; and the fact that the program dies automatically and must continually be renewed with new people. Also, only one graduate has thus far been hired by FAS for a career, professional position.

Employee contacts should be an important method of recruitment. Thus far they have not. Young FAS professionals have been reluctant or unwilling to establish pipelines to their colleges, even when encouraged to do so by Personnel with form letters. Given the possibilities of using recent graduates as recruiters, perhaps this approach should be explored further.

Upward mobility is a USDA program under which current employees are trained so that FAS is better able to promote from within. Personnel feels that this approach was more effective when it was an agency program and that results diminished when our program was absorbed by USDA.

Another Department-run program is the college study program. The selection board, which is departmental, allocates spaces to FAS and other agencies. Students attend half-time at USDA classrooms; hence, the full program takes eight years if the applicant has no college experience. At the end of the period, the student does not necessarily have a degree but does have enough credits to qualify for a two-grade professional series.

Paid advertising has been little used by Personnel except for certain secretarial and clerical positions. This approach is expensive, and though it generated phone responses when used it hasn't been successful in supplying FAS employees. ESCS uses this approach extensively in recruiting professionals, utilizing full-page ads in publications such as the AAEE newsletter. One area which FAS has not tried thus far but which might be responsive even to a low-budget advertising campaign is college newspapers.

Another approach used extensively by Personnel is recruitment by mail, with a particular emphasis upon the placement offices and agricultural economics schools at land grant colleges. Agricultural economics clubs at the land grant schools have been particularly good contacts. Unfortunately, thus far we have not been overwhelmed by the competence or receptivity of the college placement offices. When FAS last contacted all 17 of the 1890 schools, only 3 responded (and one of the three was writing to tell us not to come!). Nonetheless, this approach has generated a number of applications and it has proved to be one of the better ways to recruit minorities.

Student aids and summer aids have produced a number of FAS employees, particularly in the clerical area. Under this program, students can work 40 hours per week during the summer and a maximum of 16 hours per week during the school year. As with the cooperative education program, FAS is able to observe the applicant's job performance before offering a full-time job.

Also related to this program are the freebie programs such as the Washington Semester Program, under which students at local colleges earn college credits by working with FAS up to 16 hours per week for one semester. These students tend to bring new ideas into the office, but it is often a supervisory challenge to keep them suitably employed (colleges frown on giving 6 hours for Xeroxing 101).

It can be seen that FAS utilizes a variety of recruitment methods, and, whatever their limitations, it would be hard to say that this effort has not been producing qualified applicants. The problem is how to enlarge our applicant pool with even more qualified persons under a limited budget. This latter factor is important, for agencies such as ESCS are spending considerable sums to advertise themselves. If FAS can get better known, it can compete with anyone.

One resource that seems to have been underutilized thus far is the current FAS employees. For example, FAS professionals have a miniscule profile in organizations such as the AAEE and if they do maintain contact with their colleges they are keeping it to themselves. A coordinated program to utilize this resource could be a useful complement to Personnel's recruitment activities.

Any analysis of FAS recruitment efforts needs to include a close scrutiny of the current FAS recruitment budget. If current resources allocated to the area seem inadequate, a greater budgetary emphasis may be called for. The analysis should also look at the current FAS recruitment literature.



D. Placement of Applicants Within the Agency (How do I know who's out there?) Except for those instances where program areas do their own recruiting, applicants are scheduled for interviews by Personnel. In this process, Personnel does a certain amount of screening--rejecting some applicants, referring others to selected program areas that seem to match the applicants' aptitudes. While this process seems to have worked fairly well, many supervisors grumble, "How can I find who else is out there?"

In fact, Personnel does maintain an applicant pool of sorts. At present this consists of a cabinet of 171 forms, resumes, letters, etc. from promising applicants who, for whatever reason, are not now walking the South Building corridors and interviewing. All program areas have been invited to look at this collection, but those few who have looked, found it somewhat dated. This pool could help supervisors in their planning if it were better advertised, updated, and perhaps, made more accessible.

E. Critique of Current Program (What's wrong?)

Four things, First, insufficient funds to promote FAS in a first-class manner. Second, little communication within our agency of the many things Personnel is doing now and what role the non-Personnel employees should or could be playing in the hiring process. Third, inconsistent procedures among program areas in the selection process. Finally, inadequate long-range planning for personnel needs so that all participants in the FAS hiring process know what their resources, needs and hiring capacity will be one year from now.

Any analysis of long-range FAS hiring plans should address the question of whether individual hirings will take place as part of a coordinated plan or whether they will continue to occur on an ad hoc basis. Past FAS officials have been heard to say, "No one's asking me to hire; why should I ask them?" To a degree, this attitude still prevails. New persons tend to go to those who are howling the loudest. Some managers who are most in need of help either don't sound off or don't know how the system works. And some top officials, who may view personnel fallout as a budget cushion, may be disinclined to hire good new persons in the absence of any pressure to do so. For some, this is a healthy situation. Some analysis is required to determine whether it is healthy for the entire agency.





## Problems for Discussion--Recommendations

### PROBLEM: Hiring Uncertainty - Constraints

Constraints discussed in position paper II are such that little can be done but seek additional personnel ceilings and budget through the regular governmental process. To combat an almost certain status quo, top management needs to continue to be innovative in dealing with the Department, OMB, State, and Congress, in acquiring more resources.

However, given the probability of no increase in resources, the Agency must then emphasize its hiring program by developing a system where the best talent available enters FAS. In addition, the system must ensure that the backgrounds of employees hired meet the needs of FAS goals and its overall mission.

### RECOMMENDATIONS:

- A. A committee should be identified to develop a hiring program for the Agency that takes into account Agency directions in the 1980's. The Administrator should designate a chairman for that committee. Program staff should be represented on the committee, along with the Personnel Division. The committee's plan should reflect views expressed in the Management Conference, and be presented to the Administrator no later than March 1, 1980.

- B. Prior to each fiscal year top management in FAS shall estimate numbers of types of employees that can be hired for the upcoming year. This analysis will take into consideration budget availability, resignation/retirement curves, and overall agency intent. This information can then be utilized by Assistant Administrators in forward planning decisions relative to new hires. The system must be flexible enough to enable management to add or subtract from the initial estimate at designated times during the year.
- C. Twice a year the Associate Administrator should coordinate an extensive review of manpower requirements by program area enabling top management to determine work that can be discontinued. Objective -- to free up resources for other more active program responsibilities.
- D. Improve utilization of manpower within FAS by enacting stronger supervision.

PROBLEM: Hiring Decision - FAS Policy

A systematic guideline needs to be developed within FAS which establishes the decision chain that will be followed in reaching hiring decisions. This guideline needs to be set forth clearly so that all employees understand the agency hiring policy.

RECOMMENDATIONS:

- A. The role of the Personnel Division should be a provider of logistical assistance to supervisors in program areas including the maintenance of an applicant pool.
- B. Immediate supervisors should be the principal officers in recommending the yes or no hiring decision.
- C. The Assistant Administrators should provide supervisors with general and specific guidance on overall FAS policy as well as hiring authorities. These would be obtained from top management decisions.

PROBLEM: Process for Hiring of Young Professionals

Apart from the question of what type of new recruits FAS wants in the professional category, and apart from the necessity of maintaining an adequate pool of applicants at all times, another important question concerns the process by which these new recruits are selected and assigned to their first place of duty in FAS. Presently, this process results in too much loss of time, and at times can be confusing to the new employee in a way that either starts him off on the wrong foot or turns him away altogether.

A basic question is whether selection is the responsibility of the supervisor and his or her division director, or whether it should be the responsibility of a person or persons charged with selecting people for the agency, who in most cases will not even know, when they make the selection, to which office the new recruit will be assigned. In years past, both systems have been used but presently, at least in Commodity Programs, it appears the primary method for selection is the responsibility of the supervisor directly concerned. This practice probably is used because of disappointment among supervisors with some of the recruits being sent to them.

Perhaps another reason why this approach has become more or less customary is that in recent years there has usually



been a large pool of interested applicants so that the supervisor has had plenty to choose from and generally had been more satisfied with the result because it was his own decision. However, experience of the past couple of years shows that a high proportion of the people "interested" eventually opt for something else, so that the supervisor finds himself investing a lot of time in selection, and sometimes with no results even after three or four months of diligent effort. In part, this risk is reduced if a larger, well-pruned applicant pool were to be maintained, but it may also be that today's applicants are less certain about their interest in FAS, to a point where it may no longer be practical for the immediate supervisor to rely upon himself to do all of the screening, interviewing, and handholding that is required until each new recruit actually comes on board.

#### RECOMMENDATIONS:

- A. In order to reduce some of the lag time often experienced with hiring new recruits, the selection and hiring of a certain portion of each year's new "class" of young professional recruits should be given over to a special committee, who would carry out this task, with the assistance of the Personnel Division, and without knowledge as to where any

individual was to be placed upon reporting for duty. Access to this stream of incoming new professionals should be on a first-come, first-served basis, i.e., in order of approval for hiring by the mini-PAC. At the time of hiring, approval by the mini-PAC, the supervisor and division director concerned would have the option of taking the next available recruit which has already been hired under the committee process or, instead, go off on his own and attempt to recruit from the applicant pool or whatever contacts he can make.

The selection committee could consist of persons in the program area designated by Assistant Administrators concerned, perhaps a committee of three. These same people could participate actively in the effort to maintain a large and current applicant pool, and they could perform some of the necessary travel for gathering applications as well as making interviews in the process of selection.

#### DISCUSSION:

The principal merit offered by this system would be to place at least part of the hiring of new recruits under a system which would be ongoing and presumably more thorough.

Depending upon the committee members, this approach should add to the applicant pool, which should improve the selections, and it should reduce lag time for covering at least a portion of the vacancies to be filled by new recruits.

PROBLEM: Applicant Pool

Division Directors and other supervisors who find themselves authorized to hire to fill clerical and professional openings are frequently frustrated by an apparent lack of qualified candidates from which they can select. If a list of applicants is available, it may have only a few names, and many of those on the list will no longer be interested in the job. Division Directors report frequently hiring whoever is available -- sometimes sight unseen -- to avoid leaving a position vacant for months.

The process of screening, evaluating, and keeping tabs on the availability of qualified candidates is a very time-consuming one. The task of recruiting and maintaining a pool of applicants has not been able to capture a large share of the Personnel Divisions's limited resources in recent years, due to the many other demands for record-keeping, processing, and reporting which make up the Division's daily activity.

RECOMMENDATIONS:

- A. Maintain an adequate pool of prospective employees at all times. This task, including keeping information up-to-date, should be a high priority for the Personnel Division, and for the agency as a whole.



- B. Establish a rotating, temporary (6-12 month) recruiting and staff improvement position to assist in the task of keeping the "pool" filled with the best possible applicants. This position would be filled by a mid-level professional with broad agency experience and good public relations/management skills.
- C. Other program employees should be designated and used as recruiters. Along with Recommendation B. this would enable professionals who understand FAS programs in some detail, and can explain actual work responsibilities, to be principal parties in developing the applicant pool. Personnel should query program staff about their willingness to participate in such a program. A list of available and recommended program staff, along with a general recruitment travel plan for the year, should be presented to the PAC before March 1 of each year for approval. A suggested budgetary allowance for recruitment travel should be included in the overall hiring plan.

PROBLEM: Placement of Returning Attaches

An important source of professionals for FAS/W is the placing of returning attaches in positions appropriate to their experience, their capabilities, and the needs of the agency. Certainly the employees themselves return to Washington with considerable career concerns, such as: "Can I protect my grade?"; "Is this position helpful to my career ladder?"; and "Is this the kind of work I really want to do?" As to the actual placement of returning attaches there appears to be considerable ad hocism, i.e., PAC decisions are often based on incomplete evaluations of attache preferences and agency needs.

RECOMMENDATIONS: Improve advance communication.

- A. Directors/supervisors in Washington need to know ASAP which attaches are returning. This would give them an opportunity to provide input into the overall evaluations of the individual placement decisions made at the PAC by the respective Assistant Administrators.
- B. Attaches need to know which specific positions are likely to be available to them when they return. This is not dealt with in an orderly fashion by the agency. No group has that responsibility to returning attaches. For example, the Attache Service is most concerned with outgoing attaches and their problems

but loses complete interest in the returning attaches and the adjustments they must make upon their return. Suggest the agency give the responsibility of communicating position availability and individual position preferences to the area officers or somewhere in the Management area. This would mean that program areas would need to cooperate fully in providing position information.

The same considerations apply to returning clerical employees.

PROBLEM: Paraprofessional Careers - Statistical Units

Despite repeated pleas to correct the situation, the statistical units of FAS have been permitted to drift without any real career incentive for incumbent personnel. All too often, higher grade statistical assistants have been forced to perform work far below their ability and the level of sophistication called for in their job descriptions simply because the statistical units have been chronically understaffed. The inability to seek or attract candidates possessing a high aptitude for statistics for units that offer no real challenge for advancement has resulted in the recruitment of mediocre-to-incompetent personnel. Promotions within the units have been given largely on the grounds that failure to do so would prompt the employee to go elsewhere. But once the promotion was given, the incumbent could not assume any added responsibilities because of the persistently heavy workload of routine duties. The increasing availability of an ever-widening array of software equipment, and programming techniques has also injected the need for a much higher degree of professionalism within the statistical units. With the rapid improvement in computer techniques, a whole new era is opened up for analytical pursuits in the field of market analyses. This will call for a reorientation of



personnel if we care to capitalize on these new opportunities.

RECOMMENDATIONS:


- A. Restructure the statistical units of the commodity Divisions to permit the employment of statistical Assistants in careers with clearly defined steps or stages, training requirements and criteria for advancement to a paraprofessional level.
- B. Create training programs tailored to the needs of the unit and encourage enrollment in outside courses in statistics, mathematics, or computer techniques.

PROBLEM: Secretarial Careers

The first and foremost problem in the eyes of most secretaries is concern about not being fully utilized by supervisors. Those who feel overworked are clearly in the minority. Secretaries complain that responsibility is not passed on to their level and that there is little opportunity either in grade or in fact for them to become paraprofessionals. Another possible problem is one of a declining ratio clerical/support staff to professionals pointed out in Position Paper I. The agency may want to review this situation and alter its hiring patterns. A third problem relates to new hires. Since we are saddled with limited resources, personnel ceilings and budget, it behooves the agency to hire the best qualified candidates available. Thus will require an expanded recruitment program for secretaries, combined with continued attention to correcting the situations which result in low morale and high turnover rates, now being experienced. It is not good enough just to take "walk-in" candidates. A step in the right direction has been the organization of a secretarial review committee to review lower graded promotions and to interview new applicants. Lastly, a most common characteristic of many secretaries now employed in FAS is their poor mannerisms in handling phone calls and visitors. All too often informants from the outside and other offices

or agencies have remarked about the abrupt and "cold" manner in which their calls or visits were handled. Unfortunately, this initial experience can adversely influence the overall attitude toward a particular unit.

RECOMMENDATIONS:

- A. Supervisors must be better trained in the art of supervising and utilizing clerical employees.
- B. Each program area should make an evaluation of its current secretary/professional ratio a part of its annual informal hiring plan.
- C. The Personnel Division, with assistance from program employees if needed, must aggressively seek out the best secretarial candidates available. The agency must guard against simply accepting candidates on the Civil Service Roster.
- D. The Personnel Division should "test" potential secretarial employees on their mannerisms in  handling telephone calls and office visitors. Furthermore, this subject should be a major part of any secretarial training program.

PROBLEM: Intern Programs

FAS employs a few students under cooperative education, summer aid, and other paid and unpaid internship programs. These programs offer considerable potential for the identification and "pretraining" of promising potential staff members, while performing a valuable P.R. and public service function. However, some of our past interns have more or less "stumbled" into their jobs with FAS, bringing little or no background or interest in the work we do with them. For such students, we have been just "a job in Washington," and for FAS such students have been just "another warm body." Student interns have frequently felt underutilized in their FAS jobs, and internship program planning and coordination have been lacking.

RECOMMENDATIONS:

- A. An internship program coordinating committee, made up of one or two present interns, one or two young professionals, and one professional from the Personnel Division, should be established and given the responsibility of evaluating and making suggestions for the improvement of all FAS student intern programs.
- B. A new paid summer intern program for upper undergraduate and graduate level students in agricultural trade-related fields should be initiated. The program



should be widely publicized with selection on a competitive basis. Those divisions providing summer intern slots for this program would be expected to preplan suitable work activities for the interns assigned to work with them. Activities planned by the coordinating committee to give these interns an overview of FAS and its mission would take place throughout the summer.

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PROBLEM: New Technology

FAS is rapidly approaching a stage at which it will be essential for most economists to have "hands-on" facility with computers. At the same time that computers are becoming more important to our work they are becoming easier to use. Some of the anxiety about getting FAS ready for the Computer Age is based on misplaced apprehension on the part of those who remember the degree of expertise required to work at a computer terminal ten or fifteen years ago. A substantial amount of practical experience in computer-assisted research is almost a foregone conclusion in the case of agricultural economists coming out of universities today, and well qualified professionals with other backgrounds can easily acquire user skills.

The job of an analyst at FAS will be changing with the advent of more sophisticated and efficient data handling and analysis techniques. Strong backgrounds in economic analysis and evidence of the ability to produce an intelligible report (beyond the slim evidence provided by a much worked-over thesis) should be sought in professionals, if we want our overall productivity to keep pace with the labor-saving potential in the new technology.


RECOMMENDATION:

- A. For most professional positions select for analytical and written communications skills, rather than high levels of mathematical, econometric, or ADP expertise, as the more general skills are more closely related to the actual work performed by most FAS analysts.

PROBLEM: Public Image

From outside FAS the agency is generally speaking an unknown. It is, however, one of the most effective and efficient organizations in the U.S. Government. Prospective applicants need to be made aware of the agency. In particular, factors such as the excitement and interesting facets of international agriculture, its reputation as an action-oriented agency, and above all, the professional manner with which FAS employees carry out their responsibilities all make the agency a salable organization for prospective hires.

RECOMMENDATIONS:

- A. The Information Division of FAS has outstanding professionals. The work plan for the Division should be modified so that at least 10 percent of its time can be devoted to telling the FAS success story to the public using the printed and electronic news media with emphasis on reaching potential employees.
- B. The Information Division should develop a colored brochure telling the FAS story for distribution to the trade, the press, and colleges and universities. This would be very helpful in recruiting top flight personnel. 
- C. TV and radio spots in conjunction with the Advertising Council. The military uses these in their recruiting program.

- D. Funds should be established for paid advertising in selected publications. An improvement of FAS's public profile will not occur overnight or in the short term. It will result from a consistent, long term program. Recruiting cannot be a one or two week a year task and it must be supported by first class material distributed to sources from which future employees can be drawn, and by publicity about FAS and the work it does. We have a great story to tell but we only tell it to each other.







FAS MANAGEMENT CONFERENCE

OPTIONS ON THE FOREIGN SERVICE ACT

November 28, 1979





## ANALYSIS OF STATE DEPARTMENT'S PROPOSAL THAT FAS BE INCORPORATED INTO NEW FOREIGN SERVICE ACT

### State Proposal

State Department has asked that Secretary Bergland and FAS give serious consideration to FAS being included in the new Foreign Service Act. By taking this action, the Secretary of Agriculture would be authorized to use the provisions of the Act, which in State's opinion would provide FAS some important advantages and benefits. These include:

- (a) Better retirement system.
- (b) Access to diplomatic titles on the same basis as State.
- (c) Opportunity to provide Presidential Commissions to Agricultural Attaches and Counselors.
- (d) Authority to provide all present and future overseas allowances and benefits to FAS employees.
- (e) Access to future pay incentives which may be provided to Foreign Service personnel.

State emphasizes that FAS being included in the new Foreign Service Act would in no way affect its independence. The Office of the General Counsel, USDA, concurs with State's view. The Secretary of Agriculture would still maintain control of the assignment and promotion of USDA personnel overseas. FAS would be included in Section 202 of the new Act, which authorizes the heads of other agencies to use the provisions of the Act for their foreign service personnel overseas. State points out that this authority would not be delegated from the Secretary of State but rather would be a direct authority to the Secretary of Agriculture from Congress.

The law does indicate that to the extent practical all agencies should administer the provisions of the Act on a uniform basis. The Act provides for a Foreign Service Board, composed of representatives from the foreign service agencies, to set the policies for administering the Act. FAS would be a member of the Board. State, USIA, AID, and Commerce would be the other key members of the Board.

## Key Provisions of Foreign Service Act

The State Department proposal consolidates Foreign Service legislation in one Act. In many areas it eliminates or reduces the differences between FS provisions and Civil Service provisions. It also provides for the reduction of certain types of appointments within the Foreign Service, i.e., FSO, FSR, FSS, etc. Some of the key provisions of the Act are:

- Consolidate the many different pay plans into basically two, a Foreign Service schedule and the existing General Schedule (GS). The difference between the two systems would be further minimized by establishing pay scales that are closer to Civil Service levels. At GS-11 and below the pay levels are identical. (See page V of Attachment II.)
- Creation of a Senior Foreign Service (SFS) patterned after the Senior Executive Service (SES). The SFS has most of the benefits of SES with the following significant distinctions:
  - (a) three pay levels vs. SES's six. (The three levels have not yet been defined.)
  - (b) personnel titles of Minister, Minister-Counselor, and Counselor would automatically go with the above pay rates. The rank would be with the person, not position.
  - (c) only 5% non-career, vs. 10% in SES.
  - (d) a Time-in-Class (TIC) limitation provides for a "selection out" type situation, but with extensions possible and better benefits if removal from the SFS happens. There is no provision for a "fall back" to a lower graded position as in the SES.
  - (e) same bonus features as SES.
- Promotions, Pay and Retention are all closely tied to a Selected Board Review. An annual review of performance against an established performance standard determines whether an individual is promoted; receives a step increase; or if the maximum TIC has been reached, extended or separated. There are no provisions for "merit pay." However, there will be steps within each class and advancement through the steps can come every year.
- Retirement provisions are considered more liberal than CS in most cases. Anyone "selected out" in the SFC would be eligible for immediate retirement. Voluntary or optional retirement is possible at age 50 and 20 years service. The computation is

based on high three salary, but a higher percentage (2%) is applied for each year vs. a reduced amount for the first 10 years under Civil Service. The maximum number of years a person can get credit for is 35 (vs. 41 years 11 months in CS). A mandatory retirement age of 60 remains in the bill, although this provision may not survive the final version. It is possible to receive additional service credit (1½ times normal rate) for "unhealthy" posts in lieu of differential pay.

- . Grievances under the system could be handled either through a Foreign Service Grievance Board separate from the Department or through the current system. The Board would consist of distinguished citizens, not currently serving in the Foreign Service. Grievance procedures would be more streamlined in case of FS Act.
- . While Labor Relations have never been a big item for FAS, the Act provides for a Labor Relations System.

#### Key Provisions Which Need Resolving Before FAS Could Implement Provisions of Act

- . Perhaps the most difficult question the adoption of the Foreign Service Act would have on USDA would be conversion from the General Schedule (GS) to the Foreign Service (FS) and the companion changes involving the SES and the SFS. While the Act addresses the question of consolidating a dozen or more personnel systems into either the Foreign Service or the General Schedule, at no point does it anticipate going from GS to FS or SES to FS.
- . An amendment to the proposed Act could be added which would allow conversion to the FS and the SFS, but it seems unlikely that as much pressure could be brought to convert to the new system from the Civil Service as will be present in converting the present Foreign Service. Given the wording and protection of the Civil Service Reform Act, it seems unlikely that a switch from the SES to the SFS could be forced, unless it could be shown there was no real distinction between the benefits of the two systems.
- . The Act is proposed for agencies which have a greater percentage of their staff overseas, for a greater part of an individual's career. The maximum allowable time in the U.S. in one continuous session is eight years. At least one agency has proposed a shorter time and USDA could make its own decision on time, if less than eight years. Since the Act does not foresee much switching from one system to the other (foreign vs. domestic), FAS would have to consider the impact it would have on the staffing of Washington positions. At the very least it would result in



identical positions in Washington being staffed by people in two different pay and personnel systems. State Department, of course, has not seen this as a major problem in the past.

- The proposed Act involves the setting up of periods of time entitled "Time-in-Class" (TIC). More commonly referred to as selection out, the TIC is the maximum period of time an individual may be at a given level before he or she is removed from the system. There is no fall back provision to a lower grade as there is in the SES. The time set for each class or grade would be determined by USDA, not State. It would be possible to have quite long TIC at some levels. State is considering the possibility of no limitation for a select group of job classifications which have limited advancement potential. The Act provides for more liberal severance pay benefits and retirement benefits to persons selected out than to persons in the Civil Service if separated involuntarily.
- A further impact to be considered is the effect on other USDA agencies which have employees stationed overseas. The present Act would have to be modified, but it appears that provision could be made for a "limited Foreign Service Appointment" for persons serving basically on one tour assignments. Under such an arrangement they would receive most of the benefits while staying in the GS system.

#### Pros and Cons of Joining Foreign Service Act

1. Access to Senior Foreign Service Titles on the same basis as other Foreign Service personnel. The Secretary of Agriculture would be authorized to submit to Congress for approval the names of USDA overseas personnel to be promoted up to the rank of Counselor and Minister-Counselor. Promotion to the rank of Minister would require Presidential approval.

2. USDA Foreign Service Personnel would be eligible to receive Presidential Commission. This decision would be left up to the Secretary of Agriculture. In addition to the prestige factor, the District of Columbia does not tax individuals holding Presidential Commissions.

3. More liberal retirement system. Can retire at earlier age with higher benefits. (See previous section for details.)

4. Automatic eligibility for all overseas allowances by USDA foreign service personnel. Currently, USDA overseas employees are not eligible for the two round trips per year for dependents in college



being provided by State, USIA and AID. USDA employees' dependents get only one trip while in college. USDA employees are also not eligible for a death gratuity paid if loss of life is duty related while overseas.

5. More Flexibility in Management of Overseas Service. Secretary of Agriculture would establish time in class provisions for USDA overseas personnel and selection out proceedings. This would enable more flexibility in linking retention in the Foreign Service with performance.

6. Compete from only within for performance bonuses. Senior Foreign Service members would not have to compete with other USDA SES personnel for bonuses. ? But

7. Eligible for future special pay or benefits provided Foreign Service Personnel. State believes that in order to recruit qualified employees for overseas employment in the future special pay and benefits will be required. Events in Iran and Pakistan help support this contention. State believes having a separate and tougher personnel system will help persuade Congress to provide special consideration to Foreign Service personnel. If USDA personnel are under the Civil Service, it could make it more difficult for them to receive special pay or allowances.

## CONS

1. Complexity and Special Problems Associated with operating two separate personnel systems in the same agency. Administering two systems will require more resources in Personnel Division. Moving from SES and GS systems to Foreign Service and vice versa will create special problems.

2. Perception in USDA, Congress and trade that Attaches and Counselors are not really USDA employees. Joining the FS could lead to a feeling that Attaches and Counselors are not representing American agriculture's interests overseas and are only interested in joining "stripped pant" boys. This could result in loss of strong support FAS now enjoys from other USDA agencies, trade and Congress.

3. Easier consolidation of administrative control by State in future. Once all overseas personnel of agency are in Foreign Service under same personnel system argument can easily be made that administrative control should be centralized in State.

4. Mandatory Retirement. Under CS no mandatory requirement is in effect. Under FS Act it would be 60 years of age. Latter may not make it through legislative process.

5. USDA Foreign Service Personnel would have to compete with all other FS Personnel for Special Performance Pay Awards.

ADDENDUM

Just prior to the conference we received word from the Department conveying word about a meeting with the Office of Personnel (OPM). Questions involving a switch from GS to FS or SES to SFS are not addressed in the proposed legislation. The OPM does not recommend including them in the legislation, but suggest the issuing of an Executive Order if FAS elected to join the FS. Items which would have to be addressed would be such things as directed reassignments, reemployment rights to the GS system for persons separated from the FS system, and retirement rights of individuals changing from one retirement system to the other.

Attachments (2)

UNDER SECRETARY OF STATE  
FOR MANAGEMENT  
WASHINGTON

November 8, 1979

Dear Tom:

Your letter of October 29, 1979 concerning titles for certain members of the Foreign Agricultural Service comes at an opportune time.

I strongly agree that your personnel should be treated on the same basis as ours in similar situations, and I would like you to consider a permanent solution to this problem which has from time to time led to misunderstanding between our agencies and personnel.

I suggest that you join us, the new Foreign Commercial Service of the Department of Commerce, AID, the Peace Corps, and ICA as full participants in the Foreign Service of the United States by deciding to use the Foreign Service Act authorities for the administration of the FAS.

Such an action would offer FAS personnel important, new advantages and benefits. For example, they would be eligible for diplomatic titles on the same basis as all other Foreign Service personnel, the benefits of the Foreign Service Retirement System (Title VIII of the Foreign Service Act), the greater scope of training under section 705 of the Foreign Service Act, the Foreign Service Grievance System under Chapter VI, Subpart J of the Foreign Service Act, Presidential commissions under sections 533, 524 and 512 of the Foreign Service Act, Pearson Amendment assignments (§576 of FSA), career counseling (§639 of FSA), more flexible use of foreign air carriers (§706 of P. L. 95-426) and the death gratuity under §14 of the Basic Authority of the Department of State.

Mr. Thomas R. Hughes,  
Administrator,  
Foreign Agricultural Service,  
Department of Agriculture.

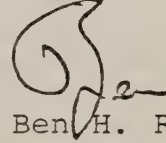
Since the title issue is so old, it deserves some additional comment. The non-commissioned diplomatic titles of Agricultural Counselor, Attache and Assistant Attache, can be given by administrative action, subject to the approval of the host country. For the commissioned diplomatic titles of Vice-Consul, Consul, Consul General, Secretary of Embassy, Counselor of Embassy, Minister-Counselor and Minister, it is necessary for the President to nominate and the Senate to give its advice and consent. Such commissioned titles are available only to members of the Foreign Service. Thus FAS participation in the new Foreign Service Act would permanently end the titles issue for both administrative and Presidentially commissioned titles.

FAS use of Foreign Service Act authorities would not limit the authority of the Secretary of Agriculture. This is because the Bill directly authorizes the heads of participating agencies to use its authorities. They are not delegated to them by the Secretary of State.

This change would offer FAS personnel important advantages and result in more equitable and uniform treatment of Government personnel serving abroad. It would also end longstanding differences between our Departments and would certainly result in a stronger Foreign Service.

// If Secretary Bergland and you are willing to explore this proposal, we are prepared to discuss it indepth at your convenience.

Sincerely,

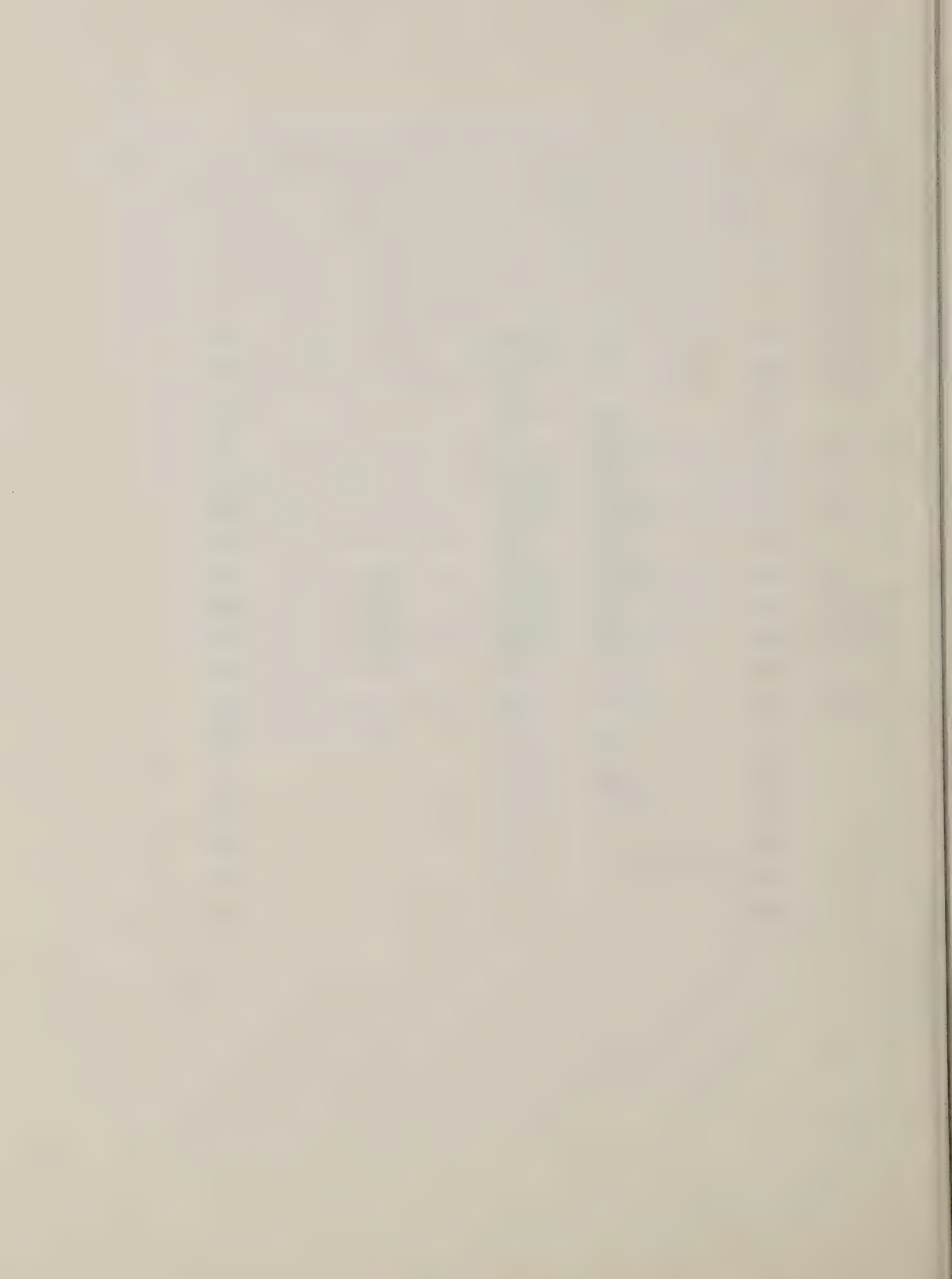


Ben H. Read



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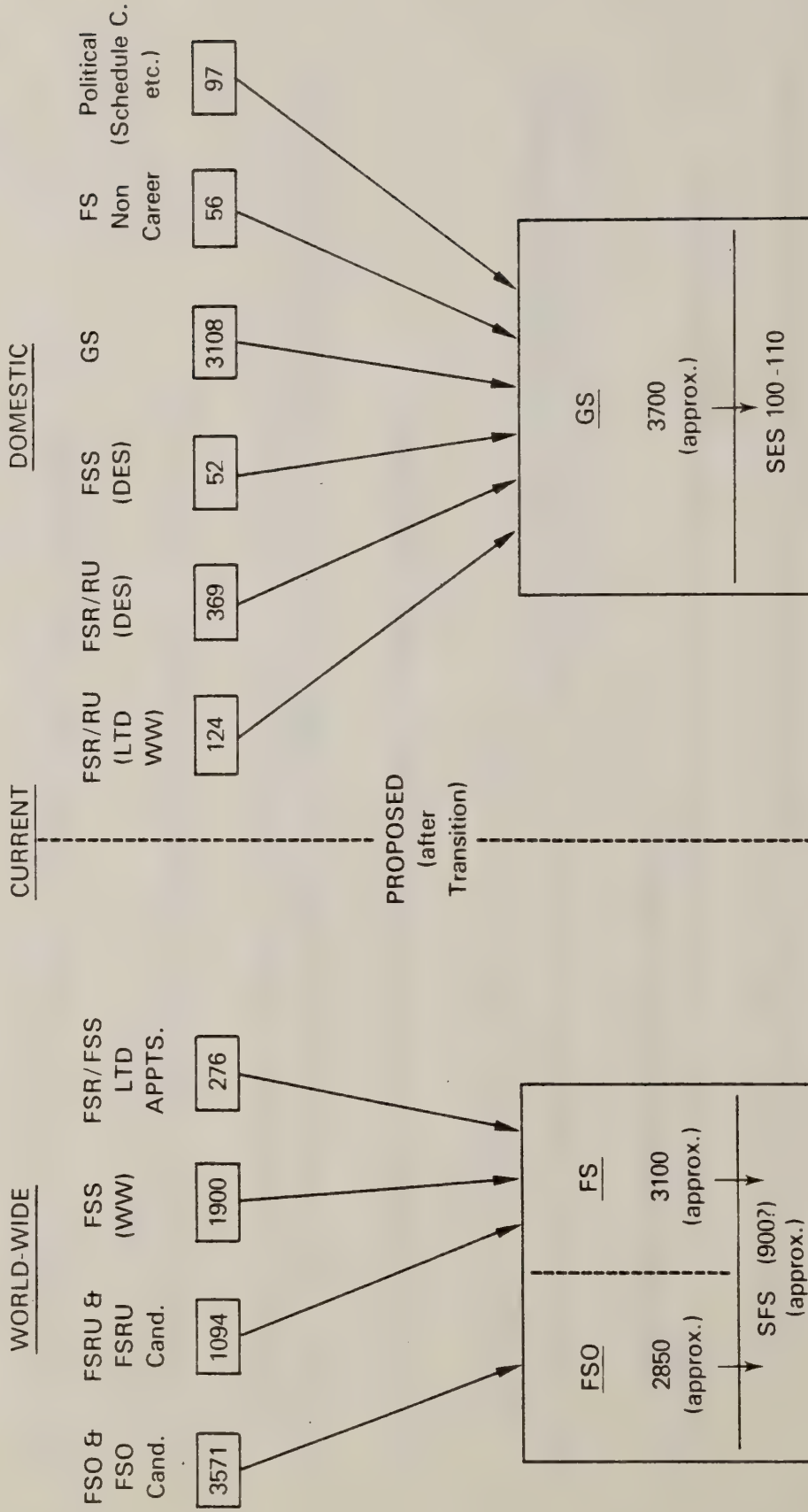
# THE PROPOSED FOREIGN SERVICE ACT



# MAIN FEATURES OF PROPOSED FOREIGN SERVICE ACT

- ☆ Consolidates Foreign Service legislation in one Act, as was a purpose of the Foreign Service Act of 1946
- ☆ Reaffirms need for a Foreign Service which is representative of the American people as well as professionally equipped for its responsibilities
- ☆ Creates a Senior Foreign Service, comparable to the General and Flag Officer ranks of the armed forces and the Senior Executive Service of the Civil Service, based on standards of excellence and controlled as to size and advancement by performance standards
- ☆ Provides opportunity for SFS performance pay for outstanding performance
- ☆ Makes clear legislative distinction between those obligated to serve abroad and those who serve only at home; but provides transition protection for those transferred from Foreign Service to Civil Service
- ☆ Reduces significantly the number of Foreign Service personnel categories and provides a single pay schedule for them
- ☆ Places labor-management relations on a statutory basis, as for Civil Service
- ☆ Provides for maximum compatibility among agencies authorized to use the Foreign Service personnel system

# DEPARTMENT OF STATE PERSONNEL SYSTEMS - CURRENT AND PROPOSED



Total Employees: 10,647



# SIMPLIFICATION OF PERSONNEL SYSTEMS

## STATE, AID, ICA

CURRENT CAREER CATEGORIES	FUTURE CAREER CATEGORIES
<ol style="list-style-type: none"> <li>1. Foreign Service Officer (FSO)</li> <li>2. Foreign Service Information Officer (FSIO)</li> </ol>	<div>FSO FSIO</div>
<ol style="list-style-type: none"> <li>1. Foreign Service Staff (FSS) - worldwide available</li> <li>2. Foreign Service Reserve Unlimited (FSRU) - worldwide available</li> <li>3. AID Foreign Service Reserve - "career" - worldwide available</li> </ol>	<div>Foreign Service (FS)</div>
<ol style="list-style-type: none"> <li>1. General Schedule (GS)</li> <li>2. FSS - limited worldwide available</li> <li>3. FSS - domestic service only</li> <li>4. FSRU - limited worldwide available</li> <li>5. FSRU -domestic service only</li> <li>6. AID FSR - domestic service only</li> </ol>	<div>GS</div>
	SFS
	SES

# PROPOSED REVISION OF FOREIGN SERVICE PERSONNEL SYSTEM

CURRENT CLASSES		CAREER AMBASSADOR*		(GS Equivalents) **
Career Ambassador		MINISTER		
Career Minister		MINISTER COUNSELOR		
FSO/R/RU - 1		COUNSELOR		
FSO/R/RU - 2				
		SFS THRESHOLD		
FSO/R/RU - 3 FSS - 1	1	1	1	(GS-15)
FSO/R/RU - 4 FSS - 2	2	F	F	(GS-14)
FSO/R/RU - 5 FSS - 3	3	S	S	(GS-13)
				(GS-12)
FSO/R/RU - 6	4	O		(GS-11)
& FSS - 4				(GS-10/GS-9)
FSO/R/RU - 7	5			(GS-8/GS-7)
& FSS - 5				(GS-6)
FSO/R/RU - 8	6			(GS-5)
& FSS - 6				(GS-4)
FSS - 7				
FSS - 8				
FSS - 9/10				

➔ Normal entry points

\* Honorary title, not pay grade

\*\* Illustrative relationship FS/GS, subject to development of final Administration position

# THE FOREIGN SERVICE CAREER I: UP TO THE SENIOR THRESHOLD

- All Foreign Service ranks limited to persons obligated for worldwide service. (Others legislatively converted to Civil Service without loss of pay, grade, benefits).
- Two Foreign Service categories would include (1) eligible FSO's, and (2) a consolidated FS category consisting of all eligible FSRU/R/SS's.
- All FS personnel serve under a single FS pay scale more closely related than currently to the GS schedule.
- No current Foreign Service class would be split.
- FSO candidates would enter at FS-6, 5, or 4 (current 8, 7, 6 equivalents) according to education and experience. FS personnel would enter at levels appropriate to occupation/specialty and education/work experience. Different occupations would have different starting and top levels.
- Time-in-Class will continue to apply to FSO's, and to FS members at comparable levels in occupations designated by the Secretary.
- At top career levels after expiration of TIC, members could continue to serve only if granted limited (not more than 5 years) career extensions based on selection board recommendations and Department needs.
- Annual selection boards would evaluate all Service members for 1) promotion, 2) offer or renewal of limited career extensions, 3) selection out for substandard performance, and 4) such other actions as the Secretary may prescribe by regulation, e.g., denial of within-class salary increase for low performance/award of additional step increases for especially meritorious service.
- All FSO and FS personnel would be hired on untenured candidate appointments, which would vary in length according to occupation group, but could not exceed 5 years.

# THE FOREIGN SERVICE CAREER: THE SENIOR THRESHOLD

## ● OVERVIEW:

Members of the Service, not at top career level, could request to be considered for the SFS at any time after promotion to class 1. Thereafter they would be eligible for the SFS for a period prescribed by the Secretary (perhaps 5 years for FSO's) after which eligibility would end. The Secretary could set a separate and shorter TIC for such "passed over" members, in order to avoid congestion in class 1.

## ● INDIVIDUAL CHOICES;

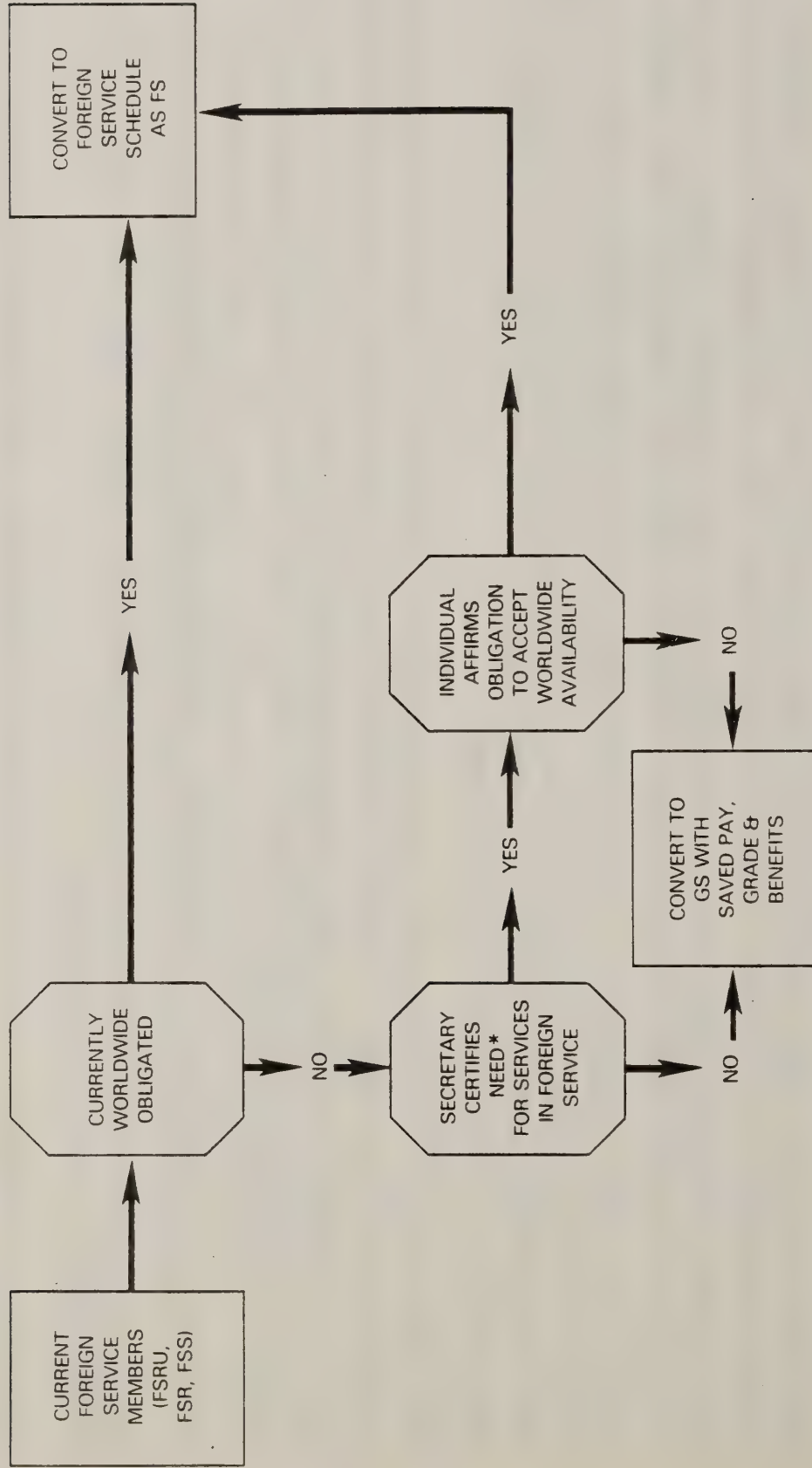
- 1) Opt not to compete for SFS--in favor of full remaining time-in-class period, but no chance for further advancement, and set date for leaving Service.
- 2) Opt to "play safe" -- request consideration for SFS only when the length of the "window" is equal to remaining time-in-class. This allows chance of advancement, while preserving maximum period for remaining in Service without a promotion.
- 3) Opt for chance to move up as soon as possible, by volunteering for SFS consideration early in time after becoming FSO/FS-1--indicates personal confidence and aspirations, and willingness to run risk of early separation if not promoted.



# THE FOREIGN SERVICE CAREER III: SENIOR FOREIGN SERVICE

- Current CM's and FSO/RU/R-1's and 2's generally available for worldwide service could elect to request SFS appointment, and would become Ministers, Minister-Counselors, and Counselors respectively. Those electing not to join would leave the Foreign Service within three years (although they could reconsider and apply to SFS Selection Board to become SFS members). During this three-year period, these officers would be subject to SFS rules and regulations, but would not be eligible for performance pay.
- Current senior officers would serve on initial SFS appointments varying in length according to the amount of time served in the equivalent current class (the longer in class, the shorter the initial appointment). After transition, those promoted to Counselor, or from one SFS class to another, would serve initially under the TIC limits of no more than 5 years.
- Upon expiration of TIC (or initial SFS appointments when converting from current senior classes), members of the SFS would be considered by Selection Boards for limited career extensions for periods to be set by the Secretary (perhaps 3 years on average). Management would determine the number of extensions to be granted on the basis of Department needs. Those not granted extensions would leave the Service, with an immediate annuity.
- Base pay at 3 SFS levels (range \$44,756-\$50,000) plus performance pay (up to \$66,000 total compensation).
- Up to 5% of SFS positions could be filled non-career; some SFS positions would be available for stretch assignments, continuing current practice.
- SFS exchanges with SES in State and other agencies; requirement for both agencies to agree would protect against imbalances.
- Annual Selection Boards would evaluate all SFS personnel for 1) promotion / limited career extension, 2) selection out for substandard performance, 3) performance pay.

## TRANSITION BELOW THE SENIOR LEVEL



\* BASED ON: 1) AVAILABILITY OF POSITIONS TO WHICH INDIVIDUAL CAN BE ASSIGNED OVERSEAS;

2) SHORTAGE OF PEOPLE, RELATIVE TO AVAILABLE POSITIONS IN INDIVIDUAL'S OCCUPATION CATEGORY.

NOTE: ALL FSO'S WORLDWIDE OBLIGATED AND WILL CONVERT TO NEW FS SCHEDULE.

# SENIOR EXECUTIVE SERVICE AND SENIOR FOREIGN SERVICE

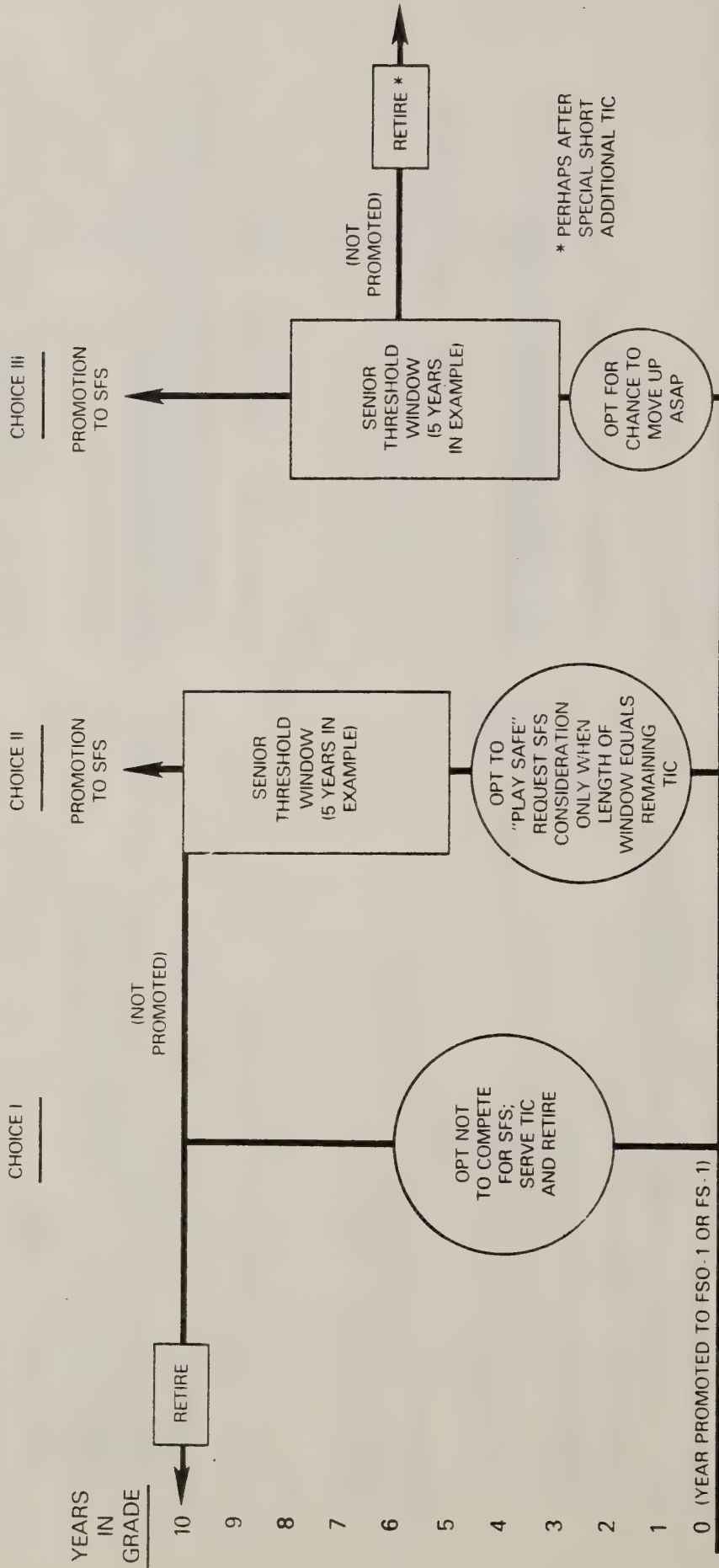
## SES

- Ungraded System for Managers (6 base pay levels)
- 9,000 positions (100 - 110 in State 120 AID, 23 ICA, 10 ACDA)
  - No more than 10% of all SES positions government-wide (and 25% in a single agency) can be filled non-career
  - Excludes Presidential appointees
  - SFS can fill most SES positions on excursion basis while staying in FS system
- ENTRY via 1) agency recruitment and evaluation against qualification standards; 2) OPM evaluation of managerial qualifications
- PAY
  - Base (\$44,756 - \$50,000) depending on level
  - Performance pay (up to 20% of base for up to 50% of SES career officers)
  - Bonus of \$20,000 for 1% (Distinguished Executive) and \$10,000 for 5% (Meritorious Executive) payable only once each 5 years
  - Cannot exceed \$66,000 (maximum of 1% of SES)
- EXIT/REMOVAL after unsatisfactory rating (must be removed if 2 unsatisfactory ratings in 5 years, or less than fully satisfactory twice in 3 years). "Parachute" to non-SES position or early retirement.

## SFS

- 3-grade system for all senior officers
- Up to 1,510 positions (900 State, 300 AID, 300 ICA, 12 ACDA)
  - Up to 5% non-career
  - Excludes non-career Presidential appointees
  - SES could fill SFS positions on interchange if meet requirements
- ENTRY via strict new Senior threshold process, meeting general standards and/or special occupational qualifications.
- PAY
  - Base (\$44,756 - \$50,000) depending on rank
  - Performance pay (up to 20% of base for up to 50% of SFS officers; incorporates SES bonus features, i.e., up to \$20,000 for up to 1%, and up to \$10,000 for up to 5%)
  - Cannot exceed \$66,000 (maximum of 1% of SFS)
- EXIT/REMOVAL via selection out (time-in-class, low ranking) or Selection Board decision not to grant limited career extension

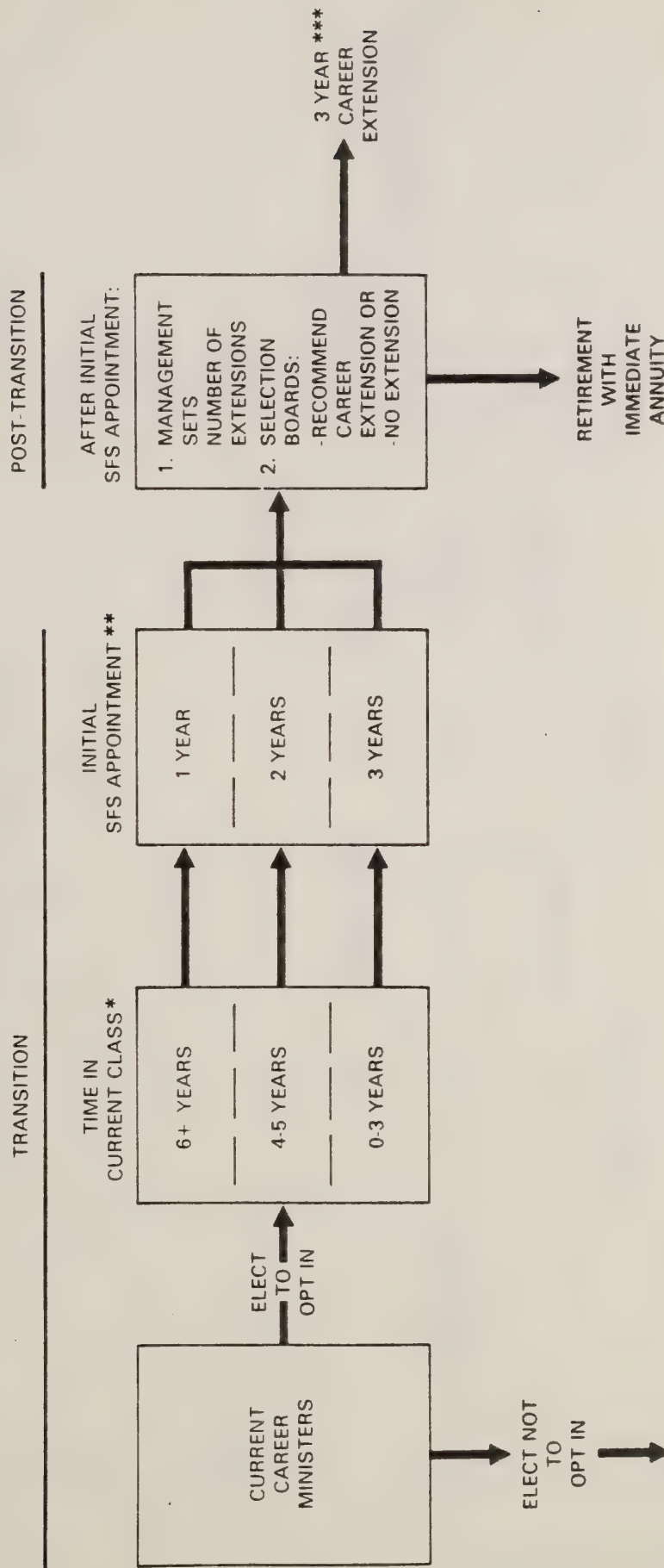
# THE SENIOR THRESHOLD: AN EXAMPLE





# FOREIGN SERVICE - TRANSITION TO SFS/SUBSEQUENT CAREER PROGRESSION

## I. Current Career Ministers



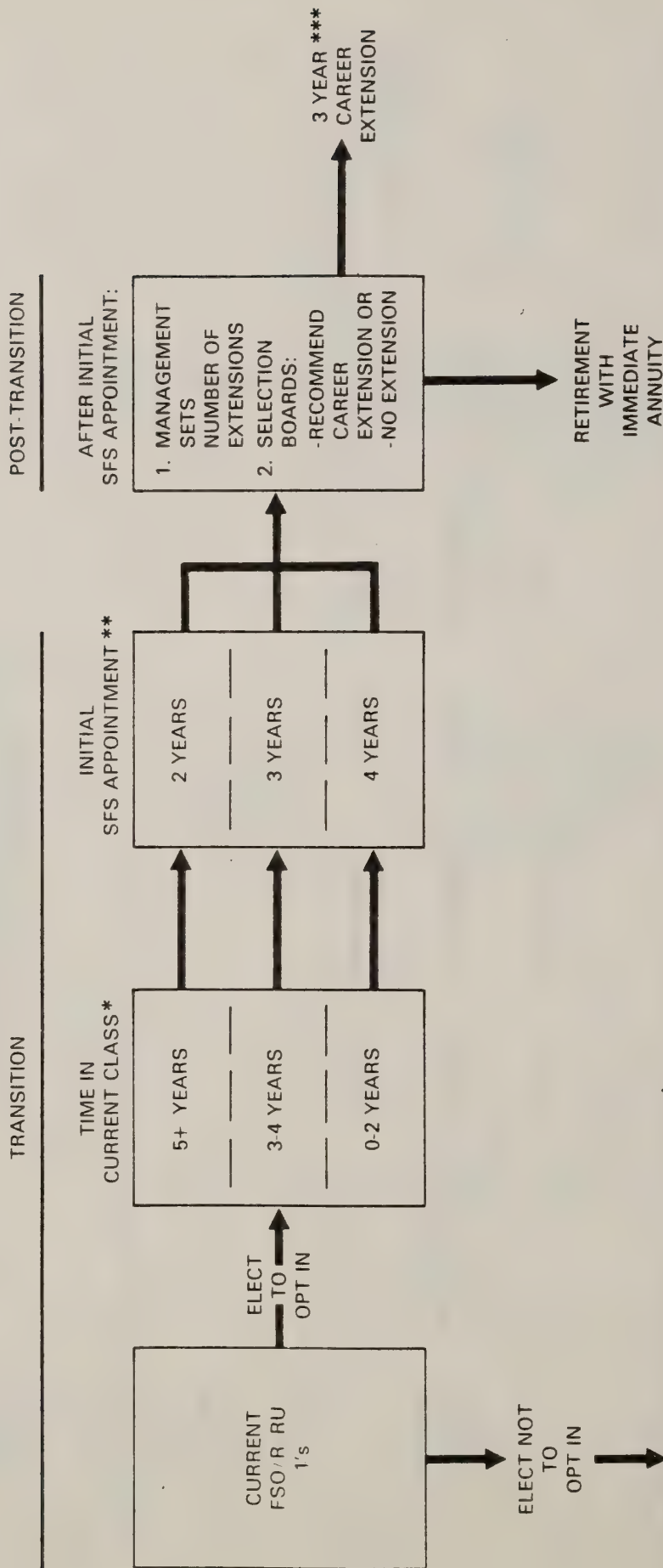
\* Illustrative - Time in current class determines length of initial SFS appointment. Times determined so that one-third of current class in each group, to stagger expiration dates of initial appointments.

\*\* Initial appointments will not be longer for any individual than time to reach age 60

\*\*\* Or other period between 1 and 5 years set by Secretary

# FOREIGN SERVICE - TRANSITION TO SFS/SUBSEQUENT CAREER PROGRESSION

## II. Current FSO/R/RU 1's



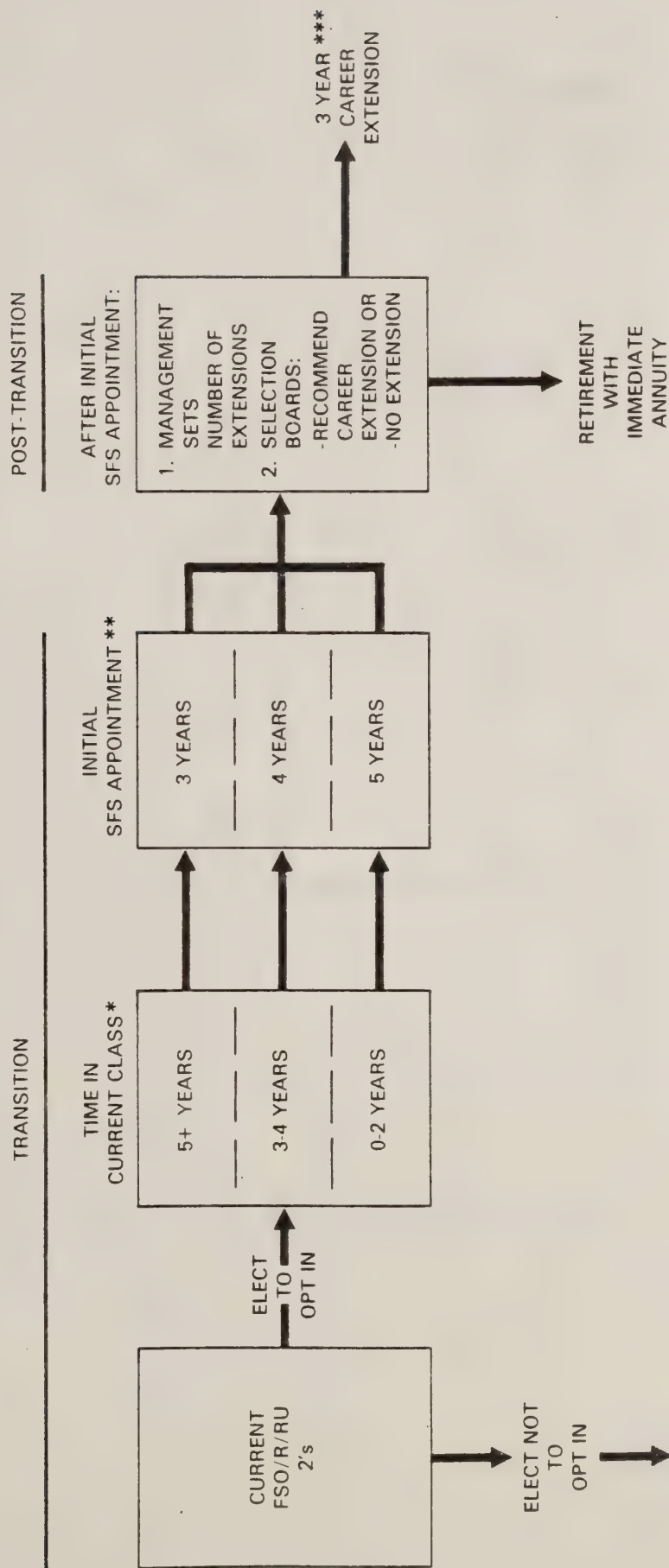
\* Illustrative Time in current class determines length of initial SFS appointment. Times determined so that one-third of current class in each group, to stagger expiration dates of initial appointments.

\*\* Initial appointments will not be longer for any individual than time to reach age 60 current remaining Time-in Class expiration of existing limited appointment

\*\*\* Or other period between 1 and 5 years set by Secretary

# FOREIGN SERVICE - TRANSITION TO SFS/SUBSEQUENT CAREER PROGRESSION

## III. Current FSO/R/RU - 2's

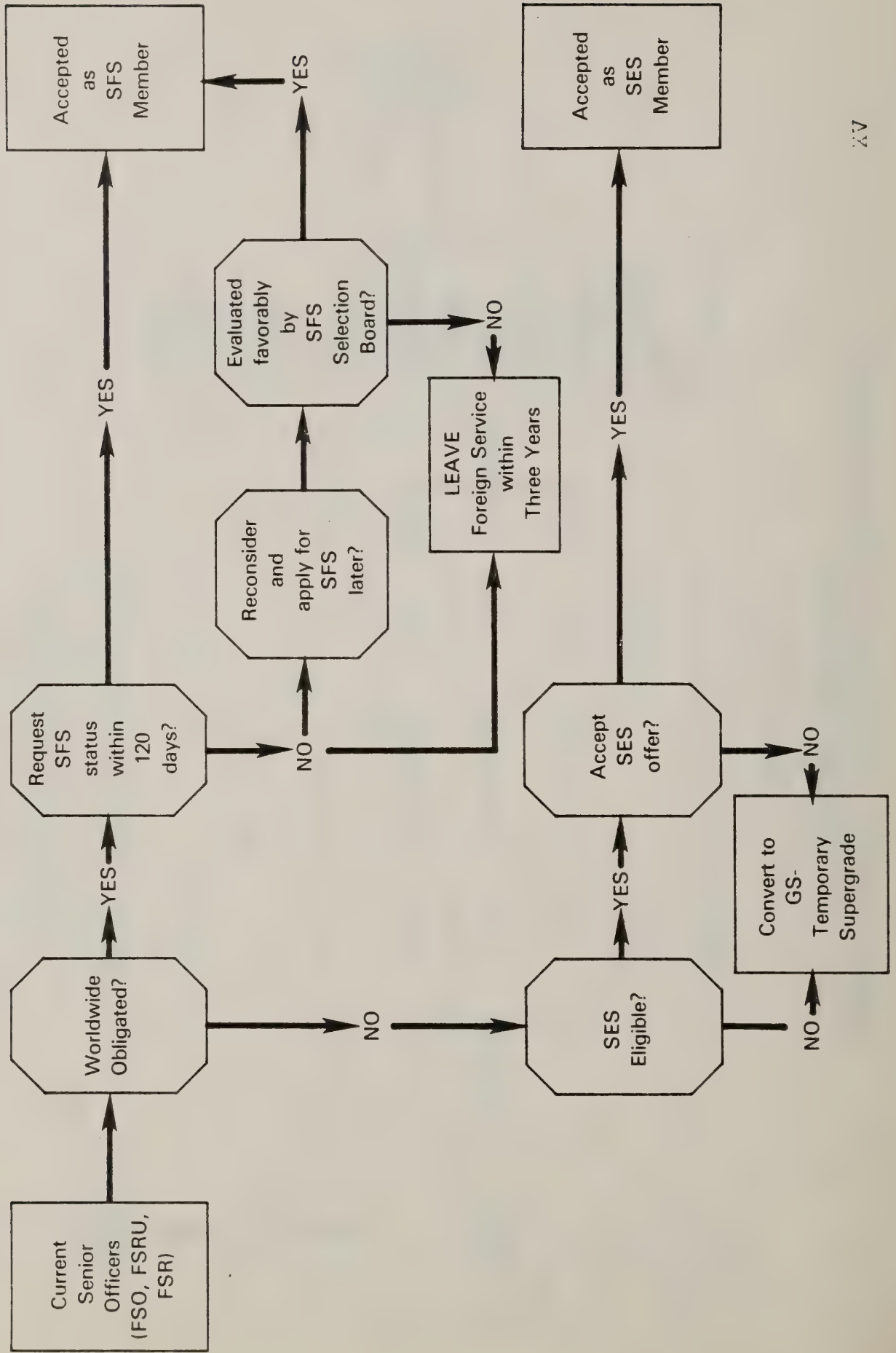


\* Illustrative - Time in current class determines length of initial SFS appointment. Times determined so that one third of current class in each group, to stagger expiration dates of initial appointments.

\*\* Initial appointments will not be longer for any individual than time to reach age 60/current remaining Time-in-Class/expiration of existing limited appointment

\*\*\* Or other period between 1 and 5 years set by Secretary

# SENIOR LEVEL TRANSITION





# CONVERSION FOR FOREIGN SERVICE (DOMESTIC ONLY) PERSONNEL TO CIVIL SERVICE

## (Sections 2103, 2104)

- IF NOT FOUND AVAILABLE OR ELIGIBLE FOR CONVERSION TO NEW FOREIGN SERVICE --

Three years to choose to convert to Civil Service or otherwise leave Foreign Service.

- IF CONVERTED TO CIVIL SERVICE--

PAY: Convert with no loss in salary.

GRADE: Convert at equivalent grade level (including temporary supergrade if FSR/RU-1 or 2; not eligible for Senior Executive Service).

BENEFITS: Option to remain in Foreign Service Retirement System (if currently a member), or to join Civil Service Retirement System. (However, if move to non-Foreign Affairs agency which uses Civil Service, must move to Civil Service system.)

DOWNGRADING: Permanent protection against downgrading, as long as do not move to a new position voluntarily.

TYPE OF APPOINTMENT: Convert to status comparable to that in Foreign Service (Career if now have career status; probational, career candidate, or limited, as appropriate, if non-career).

## Why Change? Advantages of the Proposed New Foreign Service System

### THE NEW SYSTEM

1. -- Greater emphasis on performance and productivity for compensation, and for promotion, especially to top levels (SFS and SES).
2. -- Stronger controls of numbers of employees at each level, and retention based on performance (rather than age).
3. -- Minimum number of categories necessary to carry out diverse responsibilities of foreign affairs agencies: senior, FS generalists, FS specialists, domestic (civil service); meets need for simplification of system.
4. -- Transferability between systems will be facilitated by linked pay scales and, when appropriate, operating principles (e.g., SES ↔ SFS).
5. -- Minimum number of categories, each supported by a logic related to conditions of employment (worldwide rotational or domestic; generalist or specialist), coupled with administrative improvements, providing greater certainty and more equity to all categories of employees.
6. -- Allows development of a coherent, "top-to-bottom" career system for each category of employees.
7. -- Rationalization of FS and GS systems based on worldwide and domestic needs.

### THE CURRENT SYSTEM

- Places undue premium on survival (seniority) in compensation and promotion.
- Limited means of controlling number of senior officers, and therefore, of insuring sufficient opportunities for talented, more junior employees.
- Numerous unneeded categories, and illogical use of Foreign Service authority for employees who serve only at home. Great complexity with no return.
- Transferability impeded by differing pay scales which produce promotion anomalies; adoption of SES would increase difficulties if no Foreign Service change.
- Constant attempts at change and uncertainty about future career prospects contribute to limited employee opportunities, morale/discipline problems.
- Mixed systems impede proper management of each group of employees, due to intermixing when inappropriate.
- Emphasizes "difference for the sake of difference" between the FS and GS personnel systems.







FAS MANAGEMENT CONFERENCE

FAS DEVELOPMENT PROGRAM

November 28, 1979



## FAS EMPLOYEE DEVELOPMENT

### Introduction

The Task Group was charged with evaluating employee development in general and recommending what course FAS should follow in this area during upcoming year. The Group first undertook a review of the work FAS is presently performing relative to employee development. It then evaluated this work, as well as the general concept of employee development. Based on the information gathered and discussions at Group meetings, various recommendations and an action plan for employee development were prepared. All of this work is presented in this paper.

This presentation is divided into four sections, as follows:

Part I. A general description of the current FAS employee development program.

Part II. A summation of the Task Group's findings.

Part III. Recommendations on future employee development and an action plan.

Appendix Provides some detailed information on an employee development plan and several suggested programs for some categories of employees.

## Part I

### Current Program - Fact, Observation and Opinion

Regulations pertaining to the current FAS Employee Development Program are scattered throughout several chapters of FASR Title 3. There is no single concise policy statement setting forth the purpose of the development program and its objectives. However, there is a recognition within one chapter that the purpose of the training is to develop the maximum efficiency of employees in the performance of their duties. Throughout pertinent sections of the regulations the emphasis is on training and the mechanics of obtaining such training.

A sample was taken of staff concepts of employee development. High level management indicates that FAS management considers that the agency has a rather comprehensive, many faceted employee development program and that, while improvements in implementation are needed, it is basically a good program. In addition to the more formalized training activities (e.g. Junior Professional Program), on-the-job experiences and rotation within FAS/W and the field are seen as major aspects of employee development.

Supervisors consulted do not believe FAS has had a consistent development program for its employees. Supervisors are not well aware of the FAS employee development efforts that may now be underway, except that they do know that the Personnel Division has a few people working on training needs and that training courses are periodically offered.



FAS' professionals are generally not aware of current employee development undertakings, except for the program for young professionals. This is considered to be quite good, except that its focus is too much on eventual field service and not enough on FAS/W job assignments.

Secretaries and other non professional employees are somewhat aware of FAS employee development efforts, mainly as evident in secretarial training courses and the upward mobility program, and some consider FAS employee development to be quite good. They also have found the Personnel Division to be helpful in counseling them on their development needs.

Basically FAS has three options for development of its employees, but for the most part it is not a matter of choosing one option over another but of using each option for a particular set of needs. The three options are:

1. Maintain Skills/Knowledge/Abilities
2. Improve Skills/Knowledge/Abilities
3. Acquire Additional Skills/Knowledge/Abilities

Responsibilities for employee development rest upon FAS Management, division directors, supervisors, employees and the Personnel Division. The key people presently involved in employee development are supervisors at the division level, the staff of the Personnel Programs Branch and the individual employee.

Assistant Administrators (and as appropriate the Administrator) are responsible for review of agency needs, establishing overall policy related to development, and commitment of resources to fulfill such needs. Division director responsibilities regarding

training now center on determining training needs of employees and counseling employees on certain types of training. As supervisors, division directors also are responsible for training of subordinates. Immediate supervisors are responsible for working with employees to see that appropriate development is carried out.

FAS regulations indicate clearly that the employee is responsible for his or her own development and that FAS training is intended as a supplement to self-development efforts.

The Personnel Division, as provided in FAS regulations, furnishes leadership and staff assistance in developing, implementing, and evaluating FAS training. The Division's work in the field of employee development is centered in the Personnel Programs Branch which is involved in seven areas of activities:

1. obtaining assistant administrators inventory of training needs,
2. processing SF - 182 training requests,
3. counseling employees upon request on development opportunities,
4. assisting with career development activities for FAS professional employees,
5. arranging language and other training for employees assigned overseas,
6. processing and distributing training materials, and
7. making periodic and annual reports related to the training activities.

It is evident that most of these functions are mechanical in nature.

The present development program for entry thru mid-level professionals in FAS is focused on the Junior Professional Program. The primary objective of the program is to prepare newly hired professionals for the Attache Service. In about three years, the program carries the newly hired, Attache-oriented professional up to his first overseas assignment in a series of formal and on-the-job training activities.

The Junior Professional Program has raised many questions in regard to both its goals and its implementation. These questions are directly and intimately related to the Agency's overall mission and objectives, its position management system, and its hiring policy.

Once a professional employee completes the Junior Professional Program, there is no further organized development activities. There is no development program for mid-level grade (i.e. grades 11 - 14) employees.

The development program for supervisors/managers in FAS presently is focused on the 80 hour civil service requirement for formal training. Beyond this, there is no program for selecting or training managers. In fact, managers are chosen and evaluated almost entirely on the basis of their record and performance as technicians. The New Senior Executive Service may change this and thereby have far-reaching effects on how FAS is managed.

The emphasis on developing skills in foreign national employees is in the area of improving knowledge of FAS and USDA in order to effectively understand and implement agency objectives. This is currently achieved in two ways: the attache works closely with foreign national employees to assure that the locals are well versed and comfortable with the job requirements; the attache service brings a group of foreign nationals, on a biannual basis, to visit FAS/W and tour agricultural areas throughout the United States.

The present program for the support employees consists primarily of:

Orientation for new-entry FAS employees.

Counseling and information on upward mobility programs.

Providing information to employees about training programs.

## Part II

### Findings

#### A. Agency-Wide Employee Development

- There is no established employee development plan in relation to the mission of the agency, with stated purpose and objectives.
- There is no management or employee consensus as to what constitutes employee development; i.e. employee development is seen as training and little else.
- FAS Regulations do not offer an overall systematic approach to employee development mandated by the agency; at best the regulations deal with training, e.g. training supervisors, language training and a statement of the



purpose of training.

B. Responsibility for Employee Development

- There is a lack of commitment to employee development by upper management; employee development is given low priority.
- Implementation of supervisory responsibility for development of subordinates is not in evidence.
- Budgeting of monies for employee development is not managed systematically.
- There is no documented evidence to measure the effectiveness of employees development through an organized, specific plan.
- Individualized development is not in use for review and decision making by supervisor and employees.
- The Annual Inventory of Training Needs is a "shopping list" of courses with: minimal thought given to the rationale for the employee taking the course, and training in many instances does not tie in with the work plans of the division within the program areas.
- The Personnel Programs Branch sporadically offers courses which may be seen as conflicting with employees' work.
- The role and functions of the Personnel Programs Branch in terms of facilitating and assisting in the implementation of a systematic agency-wide employee development program is not clearly defined;

- There is no evidence of implementation of a plan to assist upper management in preparing an employee development program.
- There is no evidence of using a specific method or methods for identifying training needs as an assist to supervisors in their decision-making processes regarding employee development.
- There is no evidence of evaluating present employee development activities to determine their impact on the agency, the work area and the employee.

C. Existing Employee Development

- No method for establishing the targets, by priority, for development.
- "Systematic" employee development limited to one group-- Career Development Program for junior professionals being considered for overseas assignments.
- No comprehensive program for other target populations, such as:
  - Senior Executives and Senior Executive Candidates
  - Professional, FAS/W careerists
  - Professionals returning from overseas assignments
  - Support personnel
  - FAS Foreign National employees
- Employee development activities are generally processed or initiated by the Personnel Programs Branch on a limited basis and are not necessarily integrated with the work of the program areas.

9

#### D. Constraints

- Possible limitations in budget and personnel to administer formal training activities.
- Agency is limited in offering promotions in some job classifications. This causes low morale and a negative attitude towards employee development among some employees.
- Training is seen by program area supervisors as a means for covering up the hiring of unqualified employees.
- No training positions exist within FAS.
- Conflict between the supervisor's requirements for program output and the Agency's need to develop employees for a wide range of jobs.

### Part III

#### Recommendations

- A. That FAS undertake sound systematic development of all employees and that such development activities be undertaken with the aim of meeting the Agency's objectives.
- B. That the FAS Regulations relative to employee development be completely rewritten to consolidate into one chapter all aspects of the Agency's program. The new regulations should:
  - Provide for the scope of systematic development that encompasses all FAS employees, in accordance with the needs and mission of the Agency.
  - Contain a clear statement of the program's purpose, which should be, to (a) help FAS accomplish its mission and (b)

prepare employee to better perform current job and probable future tasks within Agency.

--Clearly define the responsibilities of the Administrator, Assistant Administrators, Division Directors, supervisors, Personnel Division and individual employees in carrying out employee development.

With regard to this point, the Task Group believes that the employee is responsible for seeking and accepting development activities; Division Directors and immediate supervisors for identifying development needs and helping carry out development activities; Personnel Division for preparing and advising on specific development activities. Most importantly, top level FAS Management must see employee development as a vital contributing factor to the successful accomplishment of FAS program objectives and give the program its full support.

--Provide for monitoring and measuring the performance of the Agency and the individuals at each level of responsibility.

C. That an action program for employee development be written in line with the new FASR. In undertaking this task, the Plan of Operation prepared by the Personnel Programs Branch in December 1978 should be utilized where appropriate (see Appendix 1). Additionally, the program should:



- Include provisions for ongoing implementation and review so that it can adapt to changing needs.
  - Consider the needs of: (1) all FAS program areas (i.e., Attaches, Marketing, Commodity Programs, Trade Policy and Management); and (2) of all employees (i.e., Managers, supervisors, analysts and specialists, junior professionals, foreign nationals and support staff.
  - Include informal on-the-job instruction and experience as well as "outside" formal classes or other training, as appropriate.
  - Encourage increased counseling of individual employees relative to their development needs and goals.
- D. That top management strive to obtain and provide sufficient funds and personnel (primarily training positions) to promote effective employee development.
- E. That immediate steps be taken to institute a program for SES candidates.
- F. That systematic training to effectively incorporate the new computer/word processing system be undertaken as soon as possible.
- G. That FAS recruit only the best qualified people and that training compliment, not supply, the basic skills needed from and expected of the employee.

#### Action Plan

A permanent Employee Development Review Board should be established. It should be composed of representatives of each major program area appointed by the respective Assistant

Administrators and could be chaired by the Management Representative. There should also be a separate representative of the Personnel Division. The Board should continue in existence for an indefinite period, and members should serve for at least one year.

The Board would oversee the accomplishment of Policy Recommendations. Actual drafting of the Regulations and Plan will be done by the Personnel Division, with guidance and review by the Board. The Regulations and action program should be written on the basis of the guidelines developed by the Task Group, as agreed to or amended at the Management Conference, and be implemented by October 1, 1980.

The Board would review, at least semi-annually, the development needs of FAS during the ensuing two years. Based on this review, the Board would establish a priority list of development undertakings.

APPENDIX

This section contains:

1. Copy of the Plan of Operation for employee development prepared in December 1978.
2. A proposed career development plan for junior professionals.
3. Proposed training and development activities for support personnel.

(NOTE: Appendix 2 and 3 are examples of specialized development programs; specialized programs should be prepared for all categories of employees.)





A PLAN FOR OPERATING THE  
EMPLOYEE DEVELOPMENT PROGRAM  
OF  
FOREIGN AGRICULTURAL SERVICE

Prepared by

Margaret J. Kinnison  
Employee Development Specialist  
Personnel Programs Branch

This paper outlines a plan for operating the employee development program of the Foreign Agricultural Service (FAS). Effective implementation of the plan will improve the employee development program by making its operation more systematic.

### NEED FOR AN OPERATING PLAN

The employee development program provides activities that satisfy the needs of FAS and its employees. Each year those needs are identified and translated into appropriate activities. Experience over the past several years has enabled the program to evolve to its current offering of a wide range of activities. Employee development activities for FY 1978 up to the present are described in Attachment A. Areas of current activities are:

- obtaining assistant administrators' inventory of training needs;
- processing AD-281 training requests;
- counseling employees upon request;
- facilitating professional career development activities for FAS employees;
- arranging language and other training for employees assigned overseas;
- processing and distributing training materials; and
- making periodic and annual reports related to the training activities.

The employee development program must continue to be responsive to needs of the agency and its employees. Those needs are changing and, likewise, the program must change with them. Several factors bring the program to a new phase in its evolution. Among those factors are:

- recent reorganization of FAS;
- expanding breadth of employee development activities requested;
- new senior executive service;
- introduction and installation of new technological equipment; and

- growing recognition by employees of the importance of career planning.

The program and its activities have been reviewed quite thoroughly during the past few months. The analysis identified improvements that should be made to keep it aligned with changes that are occurring within the agency. The improvements were then incorporated in a plan for operating the employee development program. The operating plan will enable the program to move from a more traditional approach in its operation to an approach that is more systematic. Implementation of the proposed plan will:

- help employees and supervisors understand more clearly the role of the program;
- specify services to be offered;
- provide means for higher management to set priorities for program activities;
- identify needs in terms that can be translated into activities;
- guide program staff to focus more directly on meeting identified needs;
- use more efficiently the resources assigned to the program; and,
- provide means for improving the program in the future.

Analysis of the present program and of the related needs of FAS supervisors and employees suggests the employee development services they need. These services are: (1) training, (2) counseling, (3) consulting, (4) searching and (5) disseminating.

## PROGRAM ORGANIZATION AND COORDINATION

The proposed operating plan will guide implementation of the program. The plan includes: mission and goals, organization, coordination, and a flow of processes.

It is important that perceptions of the program by those people responsible for its implementation agree with perceptions by those receiving its services.

The statement of mission and goals for the employee development program can contribute toward common understanding and agreement.

The mission of the employee development program is to assist employees and supervisors meet their employee development needs. The program assists them by providing ready access to appropriate services: training, counseling, consulting, searching, and disseminating.

Goals of the employee development program correspond to its services. The goals are to:

1. offer training activities tailored to the needs of specified employee target groups;
2. provide counseling for employees in relation to their job performance and career development;
3. provide consulting for supervisors related to their employee development responsibilities;
4. conduct searching activities for supervisors and employees when they need employee development information and resources not available within FAS; and,
5. arrange for disseminating information that will help supervisors and employees carry out their responsibilities for employee development.

The employee development program mission and goals can be used to: (1) describe the program briefly when someone wants to understand its role and purpose within FAS; (2) give direction to the work of people assigned responsibility for implementing the program; (3) help people throughout the agency understand more clearly the services offered and extent to which the program can serve them; and (4) focus the program's activities so they give FAS employees access to appropriate services when needed.

The employee development program is administered in the Personnel Programs



Branch of the Personnel Division. This location within the organization of the agency enables the program to serve all employees and supervisors, including those assigned in Washington, D.C., Houston, Texas, and foreign posts.

Coordination is essential to maintain a central focus for the program. Coordination helps assure harmony among its services and integration with other programs of the agency. Likewise, stability and continuity are necessary for the program to be responsive to employee development with a dynamic agency such as FAS. Thus a systematic, effective employee development program will have as its key elements: harmony and integration and stability and continuity.

The program's services are provided by offering a series of activities needed by supervisors and employees. Some of the needs for employee development activities can be readily predicted in advance, while others are unique to special situations or needs of individuals. Predictable activities can be scheduled as standard offerings. Unique or special needs, though not known specifically in advance, can be prepared for, should they be needed. Thus it is possible to plan and prepare in advance to offer a large portion of the activities that will be needed during the fiscal year.

There is a flow of work performed each year to effectively implement the program. Three processes outline the annual flow. They are: (1) planning the annual activities, (2) conducting the activities, and (3) evaluating activities. The three processes will be examined in greater detail in the remainder of this paper.

## PLANNING THE ACTIVITIES

The first process in the annual cycle of employee development has four stages which are: (1) survey the needs, (2) set the annual objective, (3) request budget, and (4) schedule activities.

The survey of needs involves: (a) surveying supervisors' needs, (b) surveying needs of employee target groups, and (c) reporting needs to higher management. The supervisor's survey will be in questionnaire form to get general information on perceptions of how employee development services can enhance performance in each organizational subunit and to get specific information on generic types of training needed by individual employees. Another questionnaire tailored to each employee target group will be used to gather information on individual employee training needs and the most common needs of each target group. The results of these surveys will be summarized in a report to higher management.

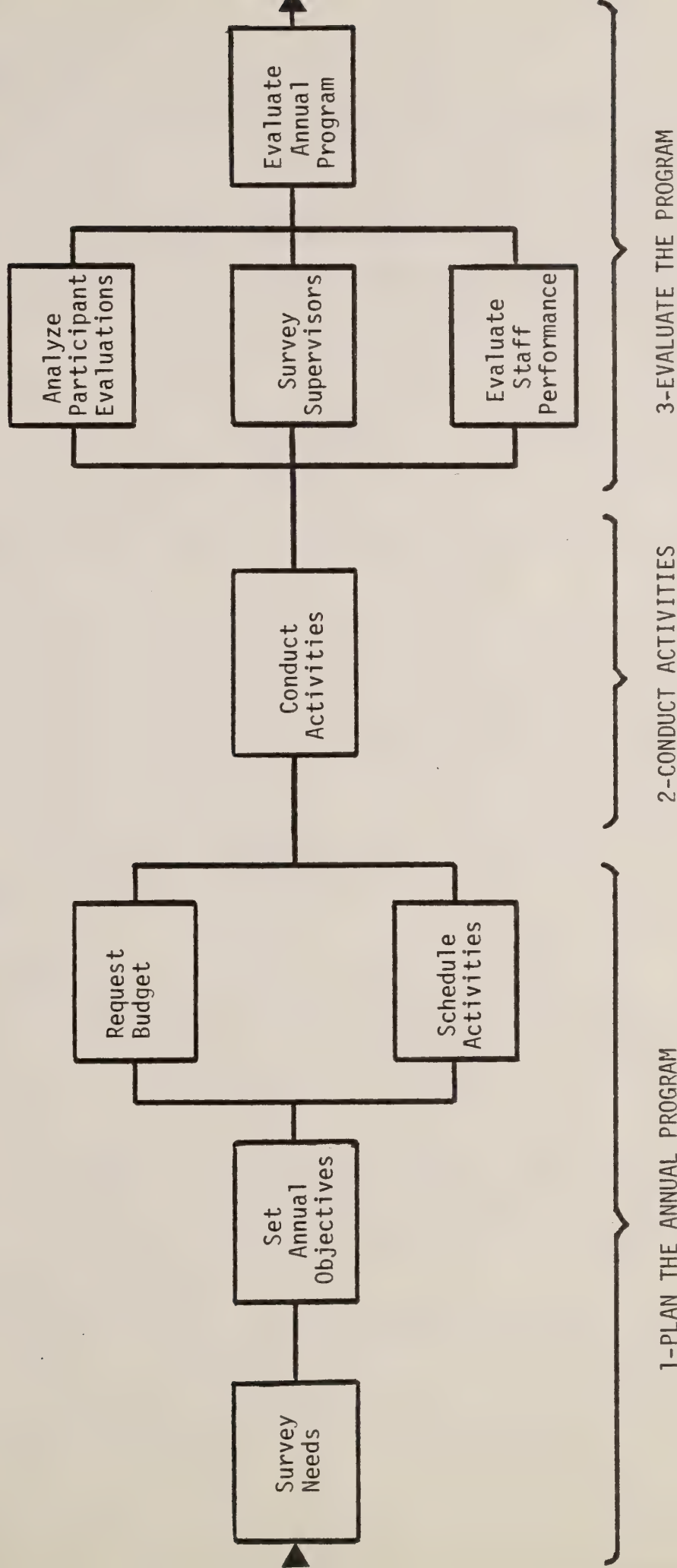
Annual objectives are set on the basis of decisions of higher management. The highest priority needs, the focus of objectives, will be addressed by the program for that year.

The training budget is then developed and expenditures projected for the coming year. Services are budgeted according to priorities with the lowest rank order services reduced or cancelled if sufficient funds are not available.

Next, activities are scheduled and rescheduled throughout the year. Activities scheduled will be publicized and updated quarterly to assure that supervisors and employee target groups affected are continuously aware of their availability.

TABLE 2-3

ANNUAL FLOW OF EMPLOYEE DEVELOPMENT PROCESSES







## CONDUCTING ACTIVITIES

The second process in the annual cycle occurs during the fiscal year. It involves conducting the activities for each service of the program as they were planned and scheduled through the planning process. Activities are conducted for: training, counseling, consulting, searching and disseminating. (See Appendix B)

Types of training activities include: courses, field trips, field assignments, conferences, presentations, workshops, seminars, individual studies, tutoring sessions, research assignments and others. Some of these activities are offered on a regular schedule and others are arranged to meet special needs. Training activities are conducted for each training category: executive, supervisory-managerial, professional and support.

Examples of managerial training activities include: university courses related to management techniques and conferences or workshops pertaining to some aspect of management, i.e., zero-based budgeting, decision making, delegating and time management. Professional training activities may include: courses on topics related to an employee's current job or a potential overseas assignment; tutoring sessions to develop needed skills such as writing or computer programming; and individual study to review concepts in a topic such as economics or statistics.

Support activities may include: courses in preparation for an overseas assignment for a secretary and workshops for support staff on telephone use, filing, dictation, and interpersonal relations.

Examples of general purpose training activities are: orientation sessions for new employees, conferences on careers and career development and special purpose as needed by an individual or FAS subunit.

Each activity is conducted so that it responds appropriately to a specifically identified need. This correspondence between need and training activity conducted, is an important feature of the employee development program.

A three-step procedure is used to assure such correspondence. Steps in the procedure for conducting each training activity are: (1) preparation, (2) delivery, and (3) followup. A second means for assuring correspondence is flexibility. Flexibility, is incorporated in the preparation step of each training activity. Flexibility enables staff to develop a training activity for: an individual or a group of employees, a short term - (such as from one session to many sessions over several weeks) - as well as long term program - (such as that necessary to train an employee for some new field, e.g., weather specialist) - and needs of employees across organizational lines - (such as secretaries or professional specialists) - and all employees in one or more subunits within FAS (such as those in one of the program areas.)

Counseling is another service in the employee development program. There are four primary purposes of counseling activities: (1) career planning, (2) reviewing career progress, (3) assessing interests and abilities, and (4) solving job related problems. Counseling activities for these purposes are of two major types: interview and seminar. An interview, the more common type of counseling activity, involves a meeting of the educational development specialist and an individual employee at the request of either of them. For an interview that pertains to career planning, a new employee would typically have drafted in advance, a career plan that follows guidelines given them in the regulations. The interview would then explore how realistic the contents of the career plan is in relation to the employee's career goals as well as options likely to be available within FAS. An interview that pertains to reviewing career progress would help the employee examine current status in relation to a career plan prepared previously and determine whether any adjustments to the plan or to performance are needed. Seminars, as a counseling activity, are used as a means to work simultaneously with several employees who have similar concerns.

For example, a seminar can be used to help several people simultaneously progress through the steps involved in career planning.

Consulting is a service available to supervisors as well as employees. Consulting involves one or several meetings between the employee development specialist and the supervisor or employee to address their concerns related to employee development. A supervisor's concerns may relate to: planning and employee development activity for a group or an individual, carrying out the activity, as well as follow-up after the activity. Examples of an employee's concerns may include: preparation for discussing an individual development plan with the supervisor and participation in an employee development activity.

Searching is a service of the employee development program that helps a supervisor or employee locate needed information or resources that are otherwise unavailable within FAS. Supervisors or employees may request searching to obtain information or services they need to fulfill their employee development responsibilities. To conduct an activity that provides this service, the employee development specialist: (1) clarifies the request with the requester if necessary; (2) seeks the information or service within FAS, then if not available; (3) locates a source for the information or service outside FAS; and (4) informs the requester of the source.

Disseminating is a service that provides to supervisors and employees information related to their interests and responsibilities for employee development. Activities of this service are initiated by an employee development specialist. The information is obtained from sources both within FAS as well as externally, such as publications. To conduct a disseminating activity, the employee development specialist: (1) scans several relevant publications routinely, (2) selects only items of significant value to individual and groups of supervisors and employees, (3) provides to selected recipients either a photostatic copy of items that are brief or a concise summary of longer items.



## EVALUATING ACTIVITIES

Evaluating activities, the third process in the annual flow of employee development processes, completes the annual cycle for a fiscal year. It is completed following the end of a fiscal year for the purpose of providing information that can be used to improve the employee development program in subsequent years.

Information, both quantitative and qualitative, is summarized through this process in an evaluation. Quantitative data are in the form of performance measures that include: number of activities, number of participants or recipients, percent of participants/recipients satisfied with activities, percent of supervisors satisfied with activities. Qualitative information is obtained about opinions and judgments by recipients of services, supervisors of recipients and program staff. A standard brief questionnaire is used to obtain responses from people in each of these groups. The quantitative and qualitative information is then compiled in an annual evaluation report that is distributed to the branch chief, director of the personnel division, assistant administrators responsible for each FAS program area, the FAS administrator and associate administrator, plus any others designated by the branch chief.



## SUMMARY

The operating plan for the employee development program provides a systematic approach which will guide the implementation of the program.

The plan will incorporate the present activities which are now in process. In addition, the plan will: (1) Use survey methods to determine needs before the beginning of each fiscal year and increase responsiveness to needs, (2) outline an operational plan which will specify services more clearly for others, (3) provide a guidebook as a reference to clarify responsibility of supervisors for employee development and provide needed information to employees, (5) make evaluations to streamline activities and improve the program, and (6) offer a program which has the necessary components to comply with the Office of Personnel requirements.



## APPENDIX 2

The training program outlined below for Junior Professionals is standardized and designed to benefit all qualified participants equally, regardless of their aspirations (i.e., the attache service or FAS/W). The program is not to be organized around any particular individual's or group's orientation. It should be supplemented by training based on the individual's interests and abilities (providing it serves FAS objectives), the supervisor's recommendations and input from FAS personnel.

### I. First Year

#### A. Seminars (required attendance for first year):

1. Outside Agencies/Companies/Co-ops, (as chosen by managers and organized by J.P.'s)
2. Young Professionals' Presentations
3. Returning Attaches

#### B. Short-Term Training

### II. Second Year

#### A. Day Trips (managers from appropriate divisions to accompany and direct designated J.P. in organizing)

#### B. Domestic Trips (same as above)

#### C. Short-Term Training

### III. Third Year

#### A. Rotation should take place around this time, depending on the situation, Possible "locations" could be:

1. Divisional

2. Extension Service

3. Co-op

4. Company

5. Farm

B. International Travel (as organized by individual  
and manager)

C. Short-Term Training

IV. Fourth Year Onward

--Development should be based on FAS needs, individual's  
career objectives and managerial evaluations.



### APPENDIX 3

Development for support personnel should be directed to improvement of their skills and knowledge in order to improve and increase productivity, qualify them for promotions and better serve the needs of FAS. This would involve formal and informal training, instruction, and practice through a carefully planned program. This development should take into account how support personnel can complement and supplement professional activities.

The types of development activities suggested are as follows:

A. Secretaries and Clerk-Typists-FAS/W

1. Periodic classes in use of new electronic equipment such as word processing. Sufficient advance notice should be given regarding enrollment eligibility, approval, etc..
2. Periodic classes to expand shorthand, typing, and other office skills to: (a) increase proficiency and (b) eligibility for advancement.
3. Newly-hired secretarial employees should be offered a 2-3 day seminar with briefing topics and reading material on such items as:
  - Preparation of Time and Attendance Records.
  - Travel expense vouchers and calculations of expenses.
  - Use of Government Style Manual and Correspondence Handbook.

--FAS Regulations, especially those most closely associated with the organizational unit to which the employee is assigned.

--Working relationships between the unit to which they are assigned and others in FAS, USDA, other government agencies and the private sector.

#### B. Statistical Assistants

1. FAS should conduct periodic training programs to meet current and anticipated statistical assistant needs. Lower grade statistical clerks would have the opportunity to develop their technical skills through in-house or more formal training, as necessary.

Basic instruction should be provided in:

-Use of calculators and other appropriate office machines.

-ADP equipment.

-Presentation of statistical information, such as how to prepare tables, charts, graphs, etc..

-Statistical methods, including such things as multiple correlations, etc..

2. Statistical personnel who have the necessary skills and have performed satisfactorily in their current positions should have the opportunity to apply for advanced technical training programs in USDA or

elsewhere at FAS expense. Such training programs should be tailored to meet FAS/W expanding needs up to the Young Professional levels in computer programming and in statistical analysis work.

C. Foreign National Non-Professionals

With the exception of only 1 or 2 positions, e.g., a driver in India, practically all non-professionals in the field are in secretarial, typist, or clerical positions. Since this situation is not likely to change significantly, training should focus on these non-professional positions.

1. An FAS/W specialist might visit Attache posts from time to time to train local secretarial and clerical employees in such areas as:
  - a. FAS and USDA organization and functions.
  - b. Current and new procedures, forms, reports, etc..
  - c. Filing and other office techniques.
  - d. Word processing and other new electronic office machines.

This type of training is particularly important for new Local employees who serve in posts that do not have an American secretary.

An alternative to visits to individual posts might be regional workshops or seminars conducted by FAS management trainers.

2. Visits by foreign non-professionals to the United States for training purposes are probably less cost-effective and less useful than discussions at posts. For example, questions regarding proper filing, etc., can be reviewed and discussed most effectively where the files can be examined by the FAS/W specialists.
3. Proper understanding of the English language and communication skills are important for the local non-professionals to have, and ongoing training should be available in this area.
4. Authority and funding should be provided for outside training of local support employees at the post for skills such as word processing and, in special instances, English.







FAS MANAGEMENT CONFERENCE

SELECTION OF FAS MANAGERS

November 28, 1979





## Selection of FAS Managers

### I. Introduction and Findings

Although the selection and training of good managers is widely recognized as one of management's most pressing problems, there is surprisingly little agreement among executives or educators on what makes a good manager or how to select a good manager. In this same regard our committee was somewhat split as to its recommendations for manager selection within FAS.

The committee agreed on three possible approaches for the selection of FAS Managers:

- a) Maintain the current system.
- b) Provide for a more structured program to dovetail with the SES Development program.
- c) Provide for an informally structured selection program.

The general consensus of the Committee was to recommend that FAS adopt the latter approach--i.e. an informally structured selection program.

## II. FAS Managers

The Committee's working definition of FAS Managers includes all Deputy Division Directors and above, as well as all Agricultural Counselors and Attaches. These managers plan and administer (1) a clearly delineated part or all of a major program of FAS work--such as international trade policy, foreign market development, and commodity analysis, (2) a major agency support activity--such as the Attache Service, personnel, or other services, or (3) the Agricultural Counselor or Attache Office in a foreign country. Functions performed by managers include: planning and establishment of broad goals, personnel and resource organization and allocation, monitoring and evaluation of performance, personnel relations, and communications with other agencies and the public. FAS managers also delegate authority to subordinate managers or supervisors.

## III. Manager Selection

Since most of the manager positions in FAS are career positions and since joining the managerial ranks for the first time usually involves promotion, merit procedures are mandatory. The key to the current FAS selection process is the competition to arrive at a best-qualified list from which the selecting official makes his choice.

Currently within FAS there are two competitive systems being used. The first is the merit promotion plan that is used in the selection of general schedule managers. The second is the recently created Senior Executive Service (SES) selection system under which all of the remaining manager positions are filled. In FAS these latter positions include the Commodity Division Directors, Assistant Administrators and some Agricultural Counselor positions, 25 in all.

The Merit Promotion System currently used to fill general schedule manager positions in FAS works essentially as follows:

- 1) As managerial positions become vacant a list of eligible candidates is assembled by the Personnel Division.

- 2) The names of the individual are listed on a rating form and points awarded to each candidate on the basis of the number of awards received, highest education level attained, performance evaluation and additional qualifications and/or training.

- 3) The list is reviewed at the Assistant Administrator level and each candidate is rated according to experience, potential and technical skills.

4) The Personnel Assignments Committee (PAC) composed of the Administrator, Associate Administrator and Assistant Administrators discusses the ratings and agree on a list of top candidates for the position.

5) The selecting official makes his selection from the best qualified list and forwards it to the Administrator for concurrence.

The selection of managers for the Senior Executive Service is new. The SES was included in the Civil Reform Act of 1978 and became a part of the FAS personnel operations on July 13, 1979

The SES includes managers at the former GS-16 through Executive Level IV or their equivalents in the Executive Branch. In theory the SES will emphasize the importance of managerial qualifications. It will provide increased mobility for managers, and pay them according to their performance.

The larger majority of SES executives (90%) are to be career managers; there is a 10% government-wide ceiling on the number who may be non-career. These are about the same percentages that existed prior to the SES. In addition, about 45% of SES positions are to be career-reserved; that is, they can be filled only by career executives.



The process for filling a career SES position is not too dissimilar from that used in the Merit Selection System for general schedule managers. However, there are some differences. A major difference is the way vacancies are announced. Briefly, there are three means of announcing SES vacancies. They are:

a) Targeted Announcements: If the SES position to be filled or established calls for a specialized background such as an Agricultural Economist, such announcements would only be circulated within those Departments most likely to have qualified candidates.

b) Vacancies can also be circulated only within the Federal Government. This would include the legislative and judicial branches as well as the executive. Such a procedure would be used if it was determined that an SES vacancy would be filled from individuals already within the government service.

c) The last option for announcing SES vacancies is to open it to candidates both from within and without the Government. Announcements in this case would go to all government departments, employment offices, outside recruiting sources such as professional societies, colleges, universities, etc., and to the legislative and judicial branches. Any person meeting the qualifications

in the announcement, could then make applications for the open position.

If FAS has a vacant SES position a request is submitted to the Department's Office of Personnel. Assuming approval is received to fill the SES position, the Agency must prepare a draft vacancy announcement (including selection criteria) and send it along with a recruitment plan to the Office of Personnel.

The vacancy announcement, once approved, is circulated in one of the three ways earlier described. The applications that are generated as a result of this solicitation would then be initially screened in FAS to assure that qualifications match those required for the position. The list of applicants is then forwarded to the Office of Personnel for review by the Executive Resource Board (ERB). This special board, appointed to consider SES applicants, serves much the same function as the PAC under the FAS procedures for the selection of general schedule managers.

The ERB evaluates the applicants and prepares a roster of best qualified candidates, which is sent to the selecting official. After the selecting official makes his choice, this name and supporting documentation is sent to the Office of the Secretary for his approval.

This is similar to FAS's Administrator concurring in the selection by the Assistant Administrator under the merit plan.

#### IV. Successes and Problems of the Current System

Since the SES system has just recently gone into effect, this evaluation deals only with the long-used merit promotion system. Many specific successes and problems probably could be detailed, but in this evaluation attention has been focused only on broad issues.

Key successes of the current management selection system are:

- Process generally has resulted in managers with strong substantive and technical knowledge of the programs managed
- The primarily internal selection process has fostered career advancement within FAS
- This usually has resulted in the best qualified personnel within FAS being given the manager jobs available

Key problems of the current management selection system are:

- Process has tended to deemphasize management training or experience as criterion for management assignment

- Inadequate focus has been placed on personnel relations and other skills of managers, both in terms of training and in careful evaluation of performance in first supervisory assignments
- A clear career advancement program of training and evaluation specifically for management assignments has not been established for mid-level professionals
- Process has resulted in fewer women and minorities in management positions than reasonably should be expected.
- A ready - supply of managers is not always available. It is sometimes necessary to fill managerial positions in FAS, at least temporarily, with personnel who are either not fully qualified as managers or whose abilities to manage have not been fully determined. Such a situation prevents such units from operating with optimum efficiency.
- Personnel stationed overseas are less readily available for managerial selection and training. A very important part of the selection process should be personal interviews of the candidates by a selection board, meaning of course, that



special arrangements would need to be made to include personnel stationed abroad.

Recommendations:

- Develop an informally structured program of training. This would include a self nominating managerial program for GS-12 level and above to assist with individual development training. Part of this program would include supervisory and management training.
- Emphasize merit competition to fill the managerial position vacancies.
- Establish a "selection board" or a subgrouping of the PAC with the task and authority of assuring the desired result of selecting, training and maintaining enough skilled managers to readily meet FAS requirements for such personnel for both the immediate and longer term.

V. Changing Environment and the Future

The selection of FAS managers today and in the future takes place against the backdrop of changing circumstances, needs and capabilities within the agency. The selection proces will need to assess the potential manager's qualifications in light of these changing conditions. In addition, the foundation of the selection

process, the training programs, will have to be geared to meet the needs and expanding capabilities of the agency.

The most apparent, recent change in the selection of FAS managers was brought about by the implementation of the Civil Service Reform Act which established the Senior Executive Service (SES). This legislation has altered the selection process significantly, primarily through additional reviews of applications at various levels and more documentation within the process. However, and perhaps more important, it has caused a change in the weight given to certain qualifications necessary to be selected for individual participation in the SES.

In the past, considerable emphasis was placed on the candidate's technical skills necessary to meet the demands of the position. Less emphasis was placed on the other managerial skills of the applicant in evaluating qualifications. Because one of the objectives of the Civil Service Reform Act was to create a pool of managers within the government who would be qualified to fill a wider range of positions, a re-evaluation of the qualifications necessary for SES selection has occurred. More weight is now being given to the applicant's total

managerial skills. The shift in emphasis has been such that a lack of adequate managerial training or experience will usually preclude membership in the SES.

While the managerial ability of SES candidates is being given more weight, the technical skills still remain essential and are also taking on a new dimension. The ever increasing demands on the agency for greater and more timely information, dissemination and improved analysis and marketing techniques are leading to the adoption of more sophisticated means of handling these demands. The increased use of computer technologies and resultant analytical capabilities are requiring and will continue to require greater technical skills on the part of FAS managers. A primary example of these advances in technology use is the introduction in the near future of direct computer hookups between FAS Washington and several Agricultural Counselor and Attache offices overseas for rapid transmittal of commodity data and other information. This program is likely to expand in coming years. Future managers, therefore, will need a greater understanding of the functioning, capabilities and limitations of this technology.

Other areas such as improved economic analysis methodologies and word processing advances will put even

greater demands on the technical skills of FAS managers. If FAS is to take full advantage of these advanced technologies and methodologies and expand our capabilities to the fullest extent, we must have managers with the ability to utilize these advances.

In summary the above changes in the environment within which FAS managers will be selected, will bring about changes in our training needs for the future. To prepare candidates for eventual managerial positions, FAS will have a responsibility to provide the training and/or experience necessary.

In the area of management training, FAS can rely on the Executive Development Program being developed by the Department but it can supplement this with a program of its own for management candidates as recommended above. In either case, because of the SES requirement that managerial skills or training be demonstrated, in practice the self-selection process for those who enter or seek the development program will be the initial screening for most SES candidates.

The training program itself, will have to be structured so as to provide the managerial background necessary to meet the requirements of the SES as well as a feeder-type merit selection program for other FAS Managerial positions.



Providing the technical training for managers to meet FAS demands is more difficult, primarily because of the wide array of technical skills required of FAS managers. How much and what type of technical training potential managers receive will probably have to be tailored to each individual's needs. Under these circumstances, the technical training program may be best designed to fill specific technical deficiencies of any individual.

Because the current FAS personnel ceiling act as a restraint on the amount of time that can be devoted to training and developing potential managers, it will be necessary to convince decision makers of the need for both additional positions and more man hours in which to develop the Managerial skills needed.









FAS MANAGEMENT CONFERENCE

SELECTION OF PEOPLE FOR OVERSEAS ASSIGNMENTS

November 28, 1979



TASK FORCE IV - Selection of  
People for Overseas Assignment

Problem: Insufficient Number of Candidates

In theory, FAS could select field personnel from any USDA source, other Federal and state government, and industry. In practice, most field personnel are selected internally within FAS. Personnel ceilings, lack of federal or FAS experience, and differences in pay scales limit free selection of individuals.

Current Situation: Emphasis is placed on job requirements and available personnel. Usually for next calendar year assignments although two-year forward planning is used for assistant agricultural attaches.

Recommendations:

1. Plan all assignments at least two years in advance.
  - a. For 10-15 selected "senior" posts, lead time may be advanced.
  - b. Specific skills developed for special purpose posts.
2. Develop FAS policy that requires all new professional employees except management be available for at least one tour overseas.
3. Obtain increase in FAS personnel ceilings to provide larger selection pool.
4. Obtain agreement from other USDA agencies to assign personnel to FAS for field assignments only with accompanying ceiling.

Problem: Lack of Qualified Personnel

In the past 25 years we have witnessed a period of unprecedented change in the agricultural sector of the world's economy as ever rising incomes have stimulated demand for food requiring increasing production and trade. This has translated into a growing need for expert personnel in Washington and in the field with special skills. Requirements for field assignments can be divided as follows:

Basic Qualification Requirements

- a knowledge of basic economics and the fundamentals of agricultural economics and the agricultural marketing systems of the United States.
- a general knowledge of American agriculture.
- a general understanding of overall USG policy and objectives.
- an understanding of the objectives and programs of the Department, both domestic and foreign, with particular emphasis on the export sales programs.
- ability and willingness to serve anywhere to meet the needs of the service.

Additional Qualification Requirements - The following skills and areas are identified as those that candidates should possess or have some knowledge of in order to qualify for assignment with the Attache Service.



- analytical skills
- foreign language capability
- knowledge of international political and economic forces
- representational and diplomatic skills
- personnel and office supervisory skills
- secretarial/clerical skills
- some office machine technology knowledge

Current Situation: From the limited number of Washington-based and field personnel the following selection procedure for professionals is followed:

- A. Attache Service identifies field needs.
  - B. Attache Service screens all candidates based on:
    - 1. Computer printouts for language and service statistics.
    - 2. Biographical data.
    - 3. Evaluations by supervisors and "spot evaluations" for young professionals.
    - 4. Empirical knowledge gained from association through work, social and/or meetings.
    - 5. Form 193 and career development plans.
  - C. Attache Service requests PAC meeting to discuss selection from final three leading candidates per post.
- Each Assistant Administrator, the Administrator and Associate Administrator are furnished advanced material.

- D. After PAC approval, individuals are contacted, assignment discussed and concurrence obtained.

Recommendations:

1. Identify FAS field and Washington job priorities and people to fill these needs over a long-term period (5-10 years).
2. Recruit professionals that are able and willing to serve to meet the needs of the service. Recognize anew that the unique role of FAS is its global network of field offices.
3. Reconfirm policy to release personnel for field assignment when needed after PAC approval.
4. Reconfirm posts that should have language requirements for chief of section and limit assignment to people who have or can obtain this skill.

Problem: Lack of Washington and Field Coverage

Due to lack of sufficient personnel, either the field or Washington must undergo a period where an individual job may not be filled.

Current Situation: Candidates for field assignments are selected in September/October for posting the following year, usually during early summer. However, orientation and language training may require their release from current assignment 3-9 months prior to departure or as early as September/October of the previous year to April/May of assignment year.

At the same time to provide post coverage and overlap, the returning field personnel usually do not leave post until about one week after arrival of replacement. Then after a period of three weeks home leave, the individual reports for their Washington assignment; a period that sometimes is up to 10 months after the previous incumbent left.

Recommendations:

1. Field assignments continue to be made and announced during September/October period and coordinated for least disruption of FAS operations and new employee placement and Washington assignments be determined at same time.
2. New training slots (at least six) be used for replacement personnel in Washington positions.
3. Division Directors be involved by Assistant Administrators early in planning and selection process.
4. Returning field personnel be advised of FAS/W assignment possibilities as soon as PAC decision is made that they are assigned to Washington.

Problem: Lack of involvement of field chiefs of section in selection process.

Current Situation: All selections except for foreign national personnel are now made in Washington with subsequent post notification.

Recommendations:

1. The area officer should improve cooperation with the field chief of section to identify priority job requirements and work skills needed for each U.S. field position using the Basic Country Program, Annual Work Plan and post supervisory visits.
2. During Washington consultation period, field chiefs of section should meet and assess leading candidates for overseas assignments.

Problem: Lack of Sufficient Number of Available U.S. Secretaries

Current Situation: There has been a need to hire U.S. resident secretaries or transfer to foreign national due to lack of available U.S. secretaries in FAS/USDA.

Recommendations:

1. Adopt a formal secretarial recruitment policy for overseas employment after appropriate rotational work/training program in Washington.
2. Eliminate U.S. secretaries in field positions except in posts where U.S. residents or foreign nationals cannot be hired.

11/26/79

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